Soap

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Thinking!

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In the all important matter of correct soap perfuming materials would you welcome the assistance of expert counsel, with unbiased recommendations, who have the ability to secure the *exact* perfuming materials which your finished goods require?

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nd Sanitary Chemicals

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ODOR is perhaps the most important factor in the successful merchandising of toilet soaps. Competition being what it is today, the up-to-the-minute soap manufacturer is insisting on the very best possible perfume available, at a price within reasonable limits.

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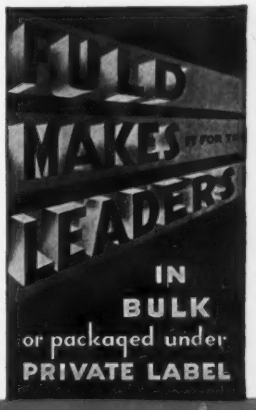

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DUPONT
Aromatics

Soap and Sanitary Chemicals

Reg. U. S. Pat. Office

Volume XVI
Number 5

MAY
1940

SANITARY Products Section, which forms a part of every issue of SOAP, begins on page 75.

MEMBER AUDIT BUREAU OF CIRCULATIONS

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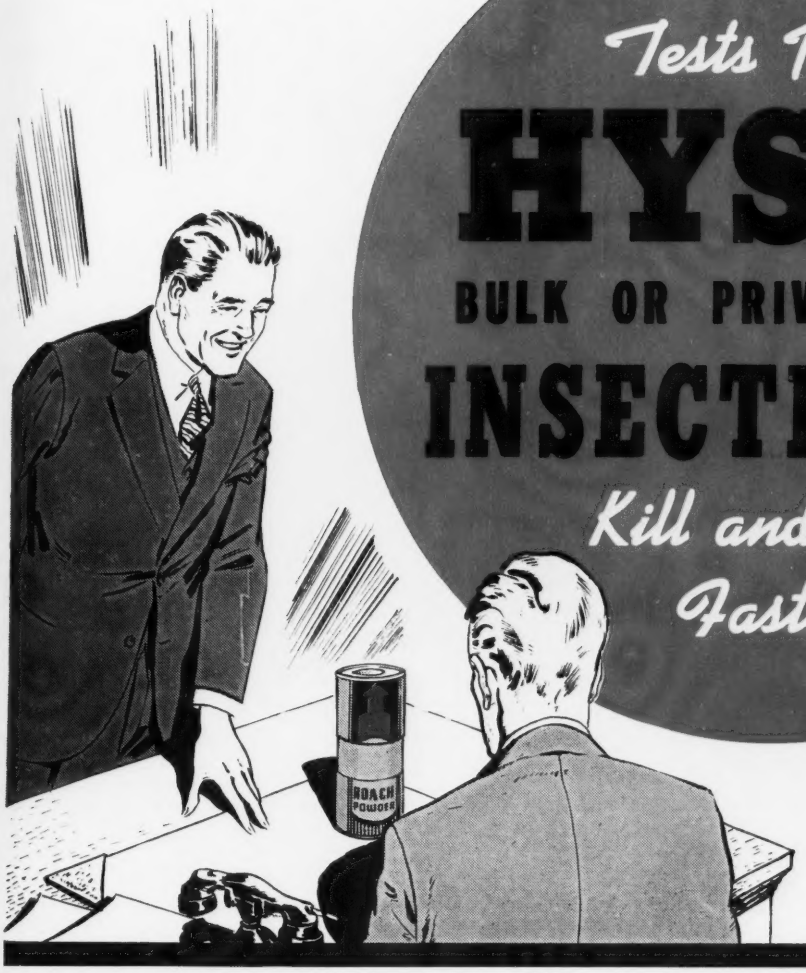

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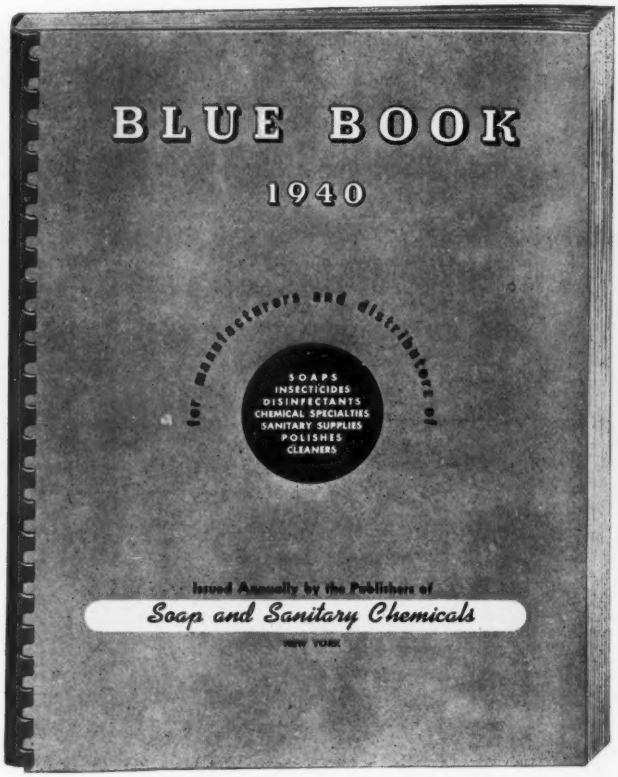

Contents of the New 1940 BLUE BOOK

Soap Perfuming—A review of perfuming principles, with detailed comments on suitability of some 150 essential oils, aromatic chemicals, resins, fixatives, etc. for use in white and colored soaps.

Labeling—A review of general labeling requirements for soaps and sanitary chemicals in the light of recent changes in federal laws. Sample labels for typical products.

Soap Builders—Notes on new and old filling and improving agents for use in soaps, their incorporation in finished products and the effects they produce.

Liquid Shampoos—A study of the various types of liquid shampoos on the market, with comments on changing formulae.

Metal Polishes—A review of the various types of polishes, with typical formulae for chromium polish, brass polish, silver polish, liquid and powder type metal polishes and polish specifications.

Specifications—A review of U. S. specifications for soaps, polishes, waxes, cleaners, chemicals, etc. Specifications of the N.A.I.D.M. for insecticides and disinfectants.

Testing Section—Latest official methods of the National Assn. of Insecticide & Disinfectant Mfrs. and of the Association of Official Agricultural Chemists for testing the efficacy of insecticides, insecticidal raw materials and disinfectants. Included in this testing section will be the Peet-Grady Test, the Seil Method, Gnadinger-Corl Method, F.D.A. Method, Mercury Reduction Method and Rotenone Determination Method.

Index to Soap—A complete composite index to the monthly issues of *Soap and Sanitary Chemicals* for the years 1934 through 1939, making it easy to locate valuable technical information and reference articles.

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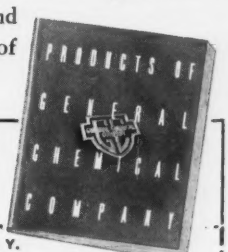

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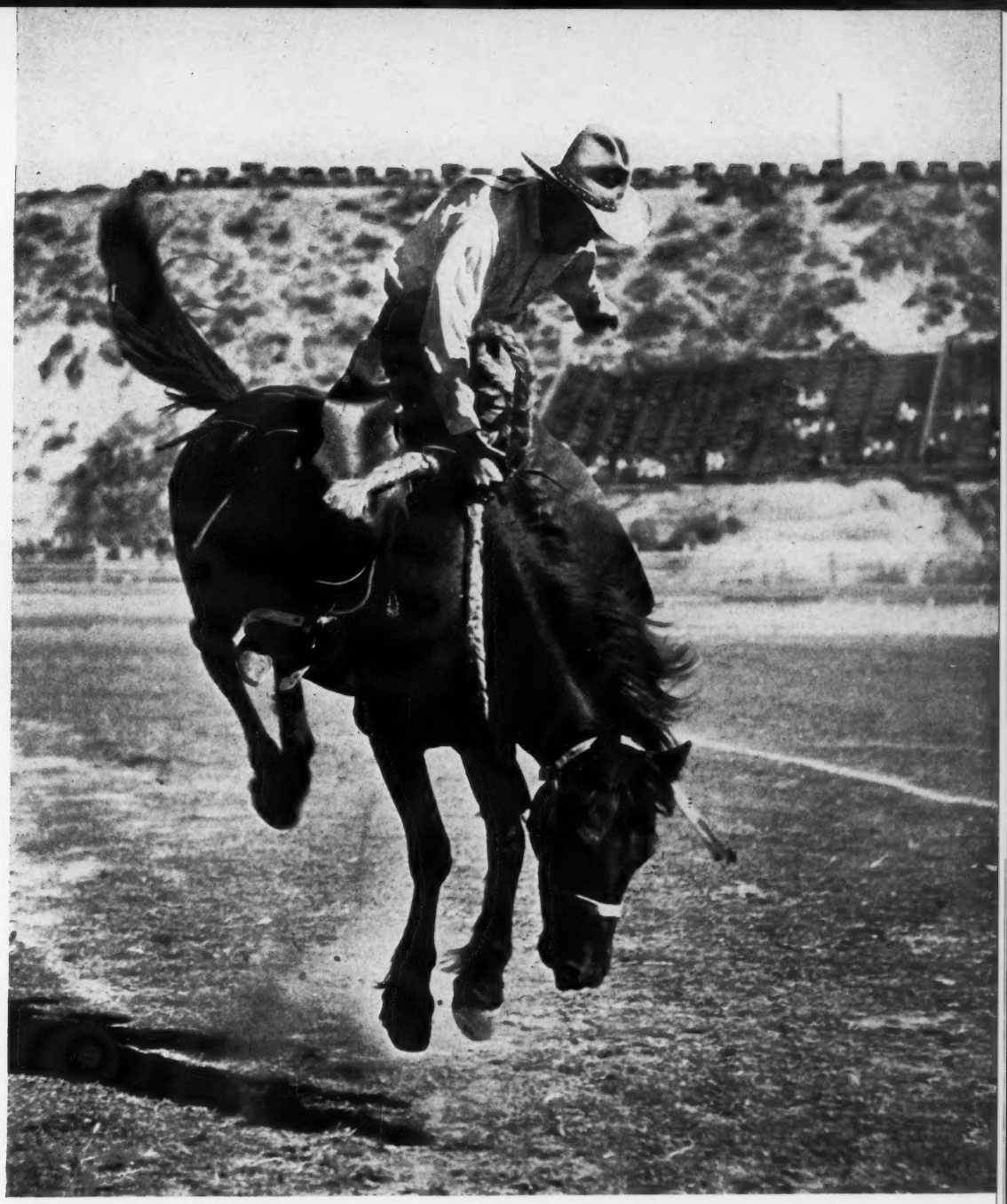

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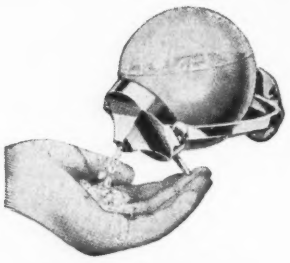

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★ PRICE
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FOAMWEL LIQUID SOAP—Foamwel gives a quick, profuse lather in both hard or soft water. It rinses off quickly leaving hands soft and smooth. Made from pure cocoanut oil and aged in cypress tanks. For these reasons Foamwel is superior to ordinary liquid soap.

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PINE-GLOSS CLEANSER—For glossy surfaces. A new principal bland neutral syrup-like cleanser to be used about one or two cups to a pail of water. Leaves a bright finish on varnished woodwork, furniture and automobiles. Cleans with a minimum of effort.

SHINE-BRITE—Of the same general characteristics as Pine-Gloss Cleanser except that it has a mild perfume odor in place of the pine smell. The modern way to clean and preserve floorings is by the use of Shine-Brite.

METEOR OIL SOAP—A light amber neutral potash vegetable oil soap recommended wherever a bland soft soap is desirable—in general on all glossy surfaces. Contains 45% anhydrous contents.

HOSPITAL GREEN SOAP—same general style as Meteor but designed for hospital use.

DAZZLE SILVER POLISH (Mineral Paste)—A white mineral polishing cream which imparts a high lustre on silver, plated ware, gold, chromium, glassware. A very fine mesh mineral is used to prevent scratching.

POLISHES, ETC.

RUB-NO LIQUID WAX—For floors. Dries bright without polishing. Does a better job than old style waxes and saves considerable labor.

PREPARED LIQUID WAX—Requires polishing. For floors, furniture, woodwork, autos. Apply with cloth and allow to dry for a few minutes. Polish with soft rag to bring out rich lustre.

DAZZLE METAL POLISH—A liquid polish for all metals. It is non-inflammable and non-settling. A lazy man's polish—maximum lustre with least effort.

GRADE "A" FURNITURE CREAM—Imparts delightful lustre to furniture and woodwork. Leaves a hard, glossy, dust-resisting surface.

LUSTRA BAR OIL—Keeps bars and woodwork clean and shiny and water-resistant. Lustra is the bartender's friend.

MOP-IN-VAR—A high grade mopping varnish made from synthetic P. C. Indene resins. Apply to all types of floors with the exception of rubber or asphalt. Reduces maintenance costs.

INSECTICIDES, ETC.

INSECTOL—Kills flies, moths, mosquitoes, roaches, fleas, bed bugs, and other insects. Very powerful and efficient. Extremely economical, as a small amount is needed. Has a pleasing odor.

MOTH-BLITE FROST—Kills moths, eggs, larvae. Use in a hand sprayer on woolens, clothes, furs, rugs, etc. Deposits a white frost which slowly disappears. Stainless and non-explosive.

MIST-O-CIDE—To be used in electric automatic insector. An odorless, highly concentrated extract which has high killing power.

INSECTOR—A Vaporizing Machine—For use with Mist-O-Cide. Operates on any light socket. Current shuts off automatically. Fool-proof, economical, efficient.

DEODORIZING BLOCKS

SENTINELS—Deodorizing Cakes De Luxe.

DEODORETTES—Popular priced cakes packed in tubes.

PACKING

PACKING—To meet your requirements, from 55 gal. drums down to 1 gal. cans for liquids. Liquid soap base, oil soap, etc. put up in 450-lb. bbls., 250 lb. ½ bbls., 140 lb. kegs, 65 lb. tubs.

ATTRACTIVE IMPRINT LABELS—and forceful sales-producing circulars are part of Clifton service you are entitled to.

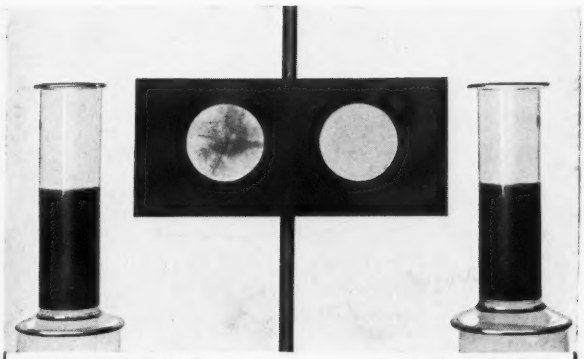
EXACTNESS—Every product described will do exactly what it is intended to do efficiently and economically. No bombastic or impossible claims are made and no Clifton representative is knowingly permitted to make such claims.

CLIFTON CHEMICAL CO., INC.

244 FRONT STREET NEW YORK, N. Y.

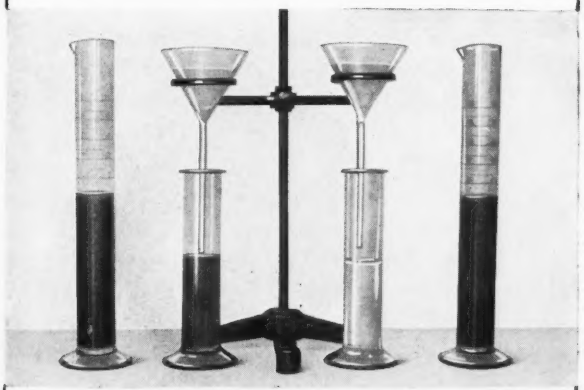
DU PONT Tetra Sodium Pyro Phosphate

Builds Better Cleaning Compounds



Without T. S. P. P. ***T. S. P. P. Added***

This experiment illustrates the advantage of dispersing dirt with Tetra Sodium Pyro Phosphate. Each cylinder contained water plus the same amount of burnt umber (a standard material used for dirt tests). The cylinder on the right contained, in addition, 0.1% T. S. P. P. Equal amounts of these solutions are filtered through two identical discs of unsized cotton fabric and rinsed twice. Notice how the dirt dispersed by T. S. P. P. passed through the cloth on the right without soiling it . . . and how the cloth on the left was soiled by deposition of the undispersed dirt on the fibers.



T. S. P. P. Added ***Without T. S. P. P.***

In this experiment the dirt (burnt umber) in the solution on the right was retained on the filter, leaving the filtered solution clear and the filter dirty. The dirt dispersed by T. S. P. P. in the solution on the left readily passed through an identical filter. The solution remains dirty and the filter clean.

● Detergent action involves not only the removal of dirt, but also the stabilization of the dirt in suspension in order to prevent its coagulation and redeposition on the article being cleaned. Outstanding among the characteristics of DU PONT Sodium Pyrophosphate as a detergent aid and soap builder is the ability to disperse particles of foreign material and to prevent their redeposition. This action is not confined to solid dirt particles but aids in dispersing grease, soil and salts precipitated through water softening.

Because of their porous structure, fabrics act as filters to remove solid particles from the washing and rinsing solutions. Due to the action of DU PONT T. S. P. P., the dispersed particles are so finely divided and uniformly suspended that they readily pass through the meshes of the fabric and are not retained to re-soil the cloth. DU PONT T. S. P. P. is also odorless, improves emulsification and sudsing. As a result, clothes wash whiter, rinse better and are cleaner.

Use DU PONT Tetra Sodium Pyro Phosphate for better soaps and cleaning compounds. Technical service is available to assist users of DU PONT T. S. P. P. in the composition of detergents.

DU PONT

E. I. DU PONT DE NEMOURS & COMPANY
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Enlist the unfailing appeal of beauty

(Senoj)

Beauty is as potent in industry today as it has been for ages in love and in art.

Appearance determines preference in the marts. Producers realizing this, are constantly seeking improvement in the design and finish of their wares.

However good in other respects, no article of commerce can dispense with the appeal of good appearance.

Poor pressing is the defect first observed in soap cakes. No matter how good the stock or how exquisite the perfume a poorly pressed cake of toilet soap encounters instant sales resistance.

Beautiful finish, the best introduction for any cake of toilet soap is guaranteed by the use of

JONES
NEW TOGGLE PRESSES

Old worn out presses and battered dies produce unsightly, unsalable soap.

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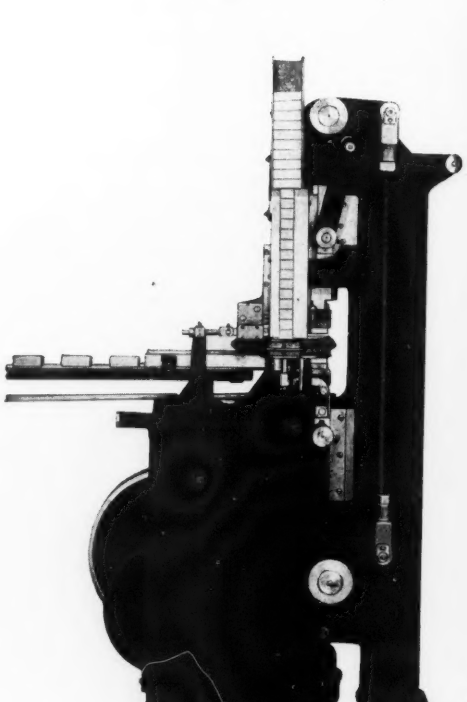

100 TO 150 PERFECTLY FINISHED CAKES PER MINUTE

R. A. JONES & COMPANY, Inc.

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The Standardized *Constant Motion Cartoner* packages, bottles, jars, tins, collapsible tubes and many other articles. It feeds, folds and inserts direction sheets and corrugated board liners with the loads.

As the Editor sees it..

COMMENTING on the future of soap and the soap industry not so long ago, a technical man of substantial background fell to talking about synthetic detergents. He held that price had been perhaps the greatest deterrent to their making further inroads into soap consumption thus far, but he did not know how long this would continue to be a factor in keeping them from establishing an even competitive footing with the soap kettle. However, during the past two years, he maintained, the position of soap has been materially strengthened in competition with the newer detergents by the wide adoption of tetrasodium pyrophosphate. Why this phosphate had not become popular as a soap ingredient a decade or more ago, he admitted was a puzzle to him, but,—and this is significant in the present quiet revolution going on in detergent manufacture,—he expressed the belief that the popular advent of pyrophosphate of late had set back the synthetic detergents at least five years in their competitive struggle with ordinary soaps.

THE impending operation of a new modern soap plant at Quincy, Mass., is significant. It is the first plant built and equipped exclusively for soap manufacture by a high-pressure continuous process, —the first large soap plant built without kettles. By some soapers, it has been heralded as the start of a long-impending revolution in soap manufacture, the beginning of the end of old-time kettle boiled soap. By others, it is held to be merely another step in a long series of recent developments in fat chemistry of which soap manufacture is a part, and not of revolutionary proportions. The process is reported to have been in use for some time in the middle-west in spite of the comparatively recent date of the patents, and to have been found suitable for some soaps and not for others.

If there is one feature of soap manufacture which soapers have for years been seeking to supplant, it is the full-boiled process. Numerous rapid saponification methods aimed to eliminate the six or seven days required to boil a kettle of soap have been tried, but none, as far as we have heard, has thus far given in full the desired results. Either the glycerine has been lost, or the finished soaps have lacked something in texture, color, stability, or the processes have not been applicable to modern, large-tonnage production for any number of a dozen good reasons.

For twenty-five years, a satisfactory method of fast saponification,—from fat to finished soap in a matter of minutes,—has been the aim here and abroad of countless hours of research. But the great bulk of the world's soap continues to be made in kettles by the full-boiled process. This Quincy development is the first large plant built from the ground up to manufacture soap rapidly and continuously without the use of kettles. Whether it marks in fact the beginnings of a revolution in soap manufacture, or is just another soap process, the next decade will probably tell. And when it does tell, half of the soap experts can look back to 1940 and say: "I told you so,"—and the other half can forget that they were wrong.

IF the Federal Trade Commission has not thrown its spotlight on your advertising and label claims so far, do not feel offended. They will catch up with you yet if you give them half a chance. So far the list of firms called on the carpet by the F.T.C. reads something like a "Who's Who of American Industry?". Their investigators are traveling the highways and byways of industry gathering data which manufacturers are all of a sudden called upon to explain. As far as we can see, most of them are ending up by signing stipulations which state in fact that "we will not say it any more."

Most of the F.T.C. cases which we have checked, do not appear to be very flagrant affairs,—sort of like a summons from an industrial traffic cop. But recently we came across one which the F.T.C. dug up, that was a beauty. This happened to be a soap whose main purpose was for washing the hair, during which process, it was guaranteed to make "straight hair curl." The advertising admonished the prospective buyer to "wake up the curls which are asleep in your hair." Evidently this made a few hairs curl at the F.T.C. also, for they promptly put the quietus on any such idea. And now what will people say when they find that their favorite hair-curling soap is no more?

BECAUSE European sources for certain products, including both raw and finished materials, have been shut off by the war, some export buyers who have heretofore purchased almost exclusively in Europe, have turned to the American market. Their inquiries have been in many instances of the emergency type, resulting from their inability to obtain materials from their usual suppliers. On the whole, these inquiries have not caused too much excitement among American manufacturers, and find them not too willing to sell except upon the stiffest terms of price and credit. Many manufacturers remember a similar situation twenty-five years ago, and all quite agree that at the first opportunity, these buyers will switch back to their old loves in Europe. Under the circumstances, their lack of enthusiasm for such business is understandable.

IN spite of the great progress which labor has made over the past five years, the suspicion that its hands are not always too clean in the accomplishment of its ends, has been widespread. In short, Americans as a whole are suspicious of labor unions. Although we may endorse the principle of collective bargaining, we suspect that much of the "bargaining" has been done with a club in the hands of a government employe or labor organizer. Furthermore, many members themselves have long since been suspicious of their own unions, and especially their leadership. But in union affairs, "silence is golden" and to break it is to pay the price.

The recent indictment of a prominent union official, head man over a large group of unions covering janitorial services and building maintenance, as the key figure in a large scale shakedown of employers, was no great surprise to the rank and file of citizens. The belief is quite widely held that this is common practice,—and what are you going to do about it? That the indicted boss happens to be an ex-convict is just another little sidelight on the labor picture. He had received the "blessing" of the big-shot labor boss in Washington, none other than the president of the A. F. of L.,—although how such stupidity could come forth from the high places of labor is more than we can fathom.

Is it any wonder what with these periodic stinks which arise from the labor unions, that employers hate like poison to treat with these unwanted and uninvited "organizers"? Isn't it natural that employers view these outside "organizers" as just a step removed from racketeers, and deal with them only because they are forced to do so by law? There is still a whale of a house-cleaning job to be done in the ranks of labor, and mostly, as we see it, in the high places.

CONTINUOUS SOAP MAKING . . .

The new Procter & Gamble plant at Quincy, Mass. gives rise to much speculation among soapers

UNTIL recently, a soap plant without kettles had been mostly an idea, or rather a number of ideas found in the patent and technical literature. Of course, cold-made and semi-boiled soaps have been made for many years in crutchers without the use of kettles, but in fact the crutcher has played the part of a kettle for the customary batch saponification. For many years, the full-boiled process has accounted for the great bulk of the soap production of the world, and still does. It has only been during the past two years that soap has actually been manufactured commercially by non-kettle continuous saponification in two plants in the United States, and reportedly one in England.

With the beginning of operations at the new plant of the Procter & Gamble Co. at Quincy, Mass., reported scheduled for early July, the first large modern soap plant, designed and built solely for use of a rapid continuous process, and without any of the usual soap kettles, will go into production. The new plant, reports say, will operate on a continuous production line from fat to finished soap. The fat is split in the first step, the glycerine separated, and the fatty acid saponified and held to an exactly controlled moisture content in the final step.

The process being used is stated to be that covered by U. S. Patents No. 2,156,863, and No. 2,159,397 to Victor Mill and owned by Procter & Gamble. The first was issued on May 2, 1939, and the latter on May 23, 1939. The processes covered by these patents are reported to have been in use at the Ivorydale plant of Procter & Gamble for the past year, and to have been confined to the manufacture of powdered and granulated laundry soaps. Reports from England, also indicate that a modification of a continuous process has been in use in the Procter & Gamble plant there for some time. The only other known operation of a complete continuous saponification process on a commercial scale in the United States is that under the Clayton Process patents (U. S. No. 1,968,526 and others) owned by Refining, Inc., Long Island City, N. Y. Several American firms are using modifications of rapid saponification processes

View of the new P&G plant at Quincy, Mass., reported scheduled to start operations July 1.

for part of their production, but none is believed to be using a fully continuous process or a rapid process throughout an entire plant. One well-known Chicago soaper is using a fast saponification method for production of toilet soap base, with considerable success, but this base is understood to be mixed with at least an equal proportion of regular full-boiled kettle chips prior to milling. During the past five years, several other rapid saponification methods have been tried out, but given up after trial as unsatisfactory.

As is to be expected in a new development of this type at Quincy, Procter & Gamble will not discuss the matter or give out information concerning it. They do not confirm or deny the innumerable reports in the industry, and as a consequence most information regarding the process and equipment is speculative. Reports state that the plant will confine its initial activities mostly to producing "Oxydol" and similar soap products. The building is a six-story structure with dockage on tide water and rail sidings. James Stewart & Co., New York, are the contractors, and Henry Mauley, New York, control engineer. The number of men to be employed at the plant will run between 200 and 300. W. R. Fulkerson who was previously superintendent at the P. & G. Baltimore plant, and who has been in Ivorydale for the past year, is the superintendent. The plant was originally scheduled to begin operations about February 1 last, according to reports, but construction delays have postponed the opening until July 1.

Further reports give additional supposed details of the operations at Quincy. They state that no toilet soaps with perhaps the exception of Lava pumice soap, (now a cold-made soap) will be made, and that the continued trend toward various powdered and globular laundry products of the past few years, marking a trend away from ordinary chips and bar soaps, places the new plant in the category of a strategic manufacturing move. The process, reported in use at Ivorydale, takes the oil or fat and first splits it in a high-pressure autoclave. The glycerine is separated and the fatty acids pumped to other special equipment where they are fed in a steady stream and intimately mixed with a caustic soda solution of very high purity. It is understood that this caustic soda is not that made by the usual cauticizing of soda ash in the soap plant, but is supplied at 50 per cent by an alkali manufacturer in special-lined tank cars. The fats are saponified almost instantly and the finished soap comes from the end of the saponification line to be pumped to spray chambers or other further processing according to the type of finished soap to be made. It is stated that the moisture content, free alkali, and other characteristics of the soap can be controlled with knife-like sharpness in the process.

The equipment in the new plant is stated to be nickel and nickel-clad steel throughout, and the raw materials and finished soaps will not touch an iron surface at any point in the process. Even storage tanks are said to be of nickel-clad steel. (One report states that the actual saponification is carried out under pressure in long horizontal channels, fitted with agitating equipment, and that the saponification takes place in one to two minutes as the fatty acid and alkali run through the channels and become intimately mixed, emerging as molten soap.) Another report states that a complete line of toilet and laundry soaps will eventually be made at the new plant.

AMONG technical men in the soap industry, the new non-kettle plant at Quincy has brought forth much discussion. They point out that only the type of high-pressure equipment which has been available during the past few years makes the commercial application of continuous fat splitting and saponification possible. One of the newer continuous fat splitting processes operates at 3,500 pounds pressure and at a temperature over 600° F. Furthermore, the newer fat splitting methods give fatty acids of much finer quality than were ever available before. The availability of pure fatty acids, it is held, is bound to change the soap manufacturing picture in the near future, making available as they do fat materials of types suitable for various fast and direct saponification methods. Pure fatty acids produced economically are stated to be the most important recent development in fat chemistry, and one which is bound to have its effect in every soap plant, large or small, over the next few years.

Simultaneously, have come developments in alkali manufacture carrying the commercial production of caustic soda even beyond the purity of grades usually required for rayon manufacture, and also in higher concentrations heretofore not available. These pure grades of caustic are very necessary in direct and fast saponification methods, particularly in any

continuous process, and open several new doors in soap manufacture. Their shipment in various non-contaminating tank cars is another essential development in getting them to the soap plant in the purest possible form.

The development of continuous soap manufacture has been gradual, as one soap man points out, and is not revolutionary. It is not going to revamp the soap industry over night, or over a period of several years. Also, the older soap products, bar soaps, chips, flakes, etc., will continue to be sold in competition with the newer items for years to come, whether made full-boiled or by fast continuous methods. The new saponification methods, he said, very distinctly have their limitations, and none knows this better than those working with the new processes. He added that numerous experimental lots of toilet soaps, made in whole or in part from continuous process soap base, have not been up to the standard of those soaps made from full-boiled kettle soap in texture or stability. It was also pointed out that where it might be economy in building a completely new plant to put in the new process, it was very questionable that the replacement of kettles and other expensive equipment in older plants could be done economically under present conditions in the soap industry.

THE patents under which the plant at Quincy will operate are believed to be U. S. No. 2,156,863 (filed May 16, 1935) covering the continuous splitting of saponifiable fats, and U. S. No. 2,159,397 (filed Feb. 18, 1936) covering the continuous conversion of saponifiable fats into soap and glycerine. The accompanying diagram shows the fat splitting and the continuous saponification process hooked together into one continuous process from fat to soap spray tower.

The fat splitting process calls for a continuous autoclave system using a catalyst capable of splitting 180,000 pounds of fat such as tallow in 24 hours, operating at 470° F. and 600 pounds pressure, giving if desired, a hydrolysis of the fats up to 98 to 99.5 per cent. Claims for the method are faster splitting of fats, higher percentage of split fat and better yield of glycerine, fatty acids suitable for soap manufacture from reasonably good fats without need of distillation, better fatty acids from low grade fats, glycerine in the form of more concentrated "sweet water," and material saving in floor space and equipment required.

The continuous saponification process claims the manufacture of a new form of comminuted soap with desirable properties with material saving in time and cost of operation. The process states that it takes two hours instead of twelve days as required under the steps of the older full-boiled kettle process. Builders such as silicate, phosphates, carbonates, etc., are added to the soap as desired by running in with the caustic soda solution. Full protection from air throughout the entire process is noted to avoid oxidation and darkening of the soap. The full process from fat to soap is indicated by the numbers on the accompanying patent diagram as follows:

. . . **1** and **2** are deaerators or deoxygenators of any suitable type for the water and fat respectively. **3** and **4** are meters for measuring the two fluids. **5** and **6** are pumps for forcing the water and fat through the apparatus at the desired pressure. **7** and **8** are heaters for water and fat respectively. **9** is a boiler or other device for supplying heating means to the heaters **7** and **8**. **10** is a tank for supply of catalyst, in which is an agitator **11**. **12** is a pump for delivering the catalyst into the fat. This pump preferably is so arranged as to act proportionally to the fat pump **6**. **13** is a

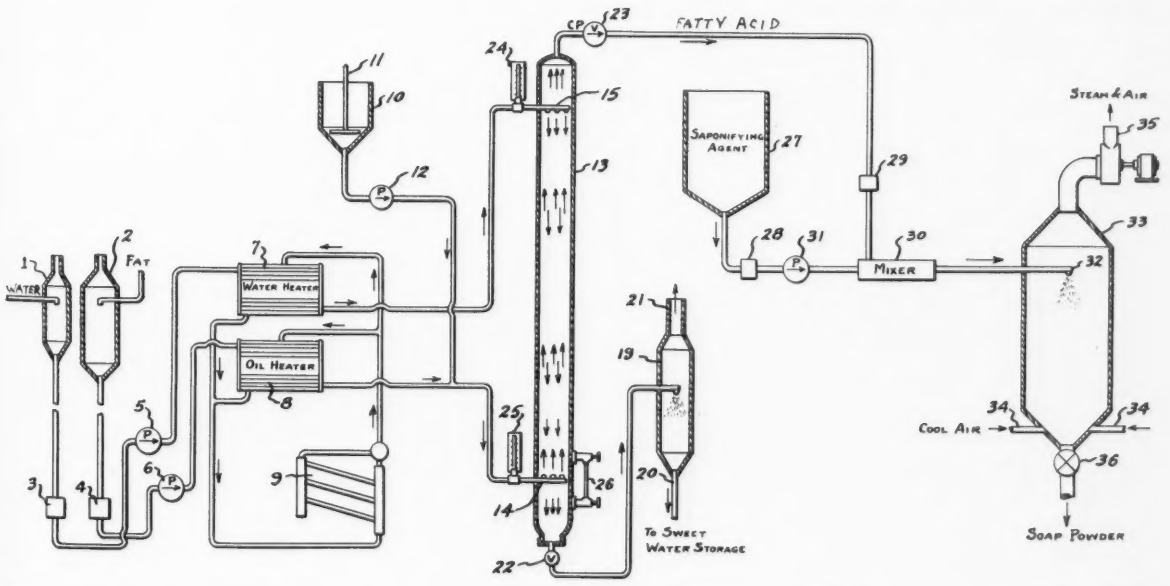

Diagram of continuous fatty splitting and saponification as covered by U. S. Pats. 2,156,863 and 2,159,397, reported as process being used at new non-kettle soap plant by P. & G.

vertical autoclave chamber into which the fat is fed at a point near the bottom through distributing pipes 14 and water is fed into the top through distributing pipes indicated by 15. 19 is a tank for receiving the "sweet water," into which it is flashed to atmospheric pressure. The concentrated sweet water then is discharged through pipe 20, and the water vapor through pipe 21. 22 is a valve for suitably regulating the rate of discharge of the "sweet water," and 23 is an automatic pressure control valve on the fatty acid discharge. 24 and 25 are thermometers, respectively in the water and fat inlet pipes to the autoclave 13. 26 is a liquid level gage to show the level of the interface between fat and water in the autoclave. The different parts of the apparatus are suitably connected by pipes as shown and provided with additional valves where needed to properly regulate the flow of the fluids. The autoclave 13 and other parts of the apparatus coming in contact with split fatty acids should preferably be made of a material resistant to the corrosive action of fatty acids. The autoclave as shown and described herein is about two feet six inches in diameter and fifty feet high, and well insulated externally to reduce losses of heat by radiation. It should be noted that there is a space at the bottom of the autoclave, below fat distributing pipes 14, which will permit the "sweet water" to settle and free itself from globules of fat. The remainder of the autoclave contains fatty matter through which the water is constantly passing. At the top of the chamber or autoclave, above the water distributing pipes 15, is a similar space to permit the fatty acids to separate completely from globules of water before leaving the apparatus.

An exemplary operation of my process consists of the following. In starting up, the water is first passed through the deoxygenator 1, through the meter 3, pump 5 where the pressure is raised to any desired point between 150 and 1600 pounds per square inch, sufficient to maintain the heated water in the liquid phase at the temperature to which it is to be heated, while the pressure in the system is maintained by means of valve 22 (temporarily closed), and automatic pressure control valve 23, on the discharge from the autoclave 13.

The water next passes through the heater 7 where it is heated to the desired temperature, between about 365° F. and about 600° F., and then passes into the autoclave 13 through the distributing pipe 15 until the autoclave is filled with water. The supply of water then ceases temporarily, and pumping of fat begins. The fat such as tallow in a molten state passes through the deoxygenator 2, meter 4, and pump 6 where its pressure is raised to substantially the same point as that of the water. The fat then passes through the heater 8 where its temperature is raised to about that of the water, and then it passes into the autoclave through distributing pipes 14. Any desired amount of catalyst, such as the oxide or soap of zinc, calcium, or magnesium, is introduced into the fat by pump 12, preferably as the fat passes from the heater to the autoclave. The pumping of fat is continued without further addition of water until the autoclave is filled with fat above the level of the water distributing pipes 14, which can be determined by the use of a suitable liquid level gage 26, on autoclave 13. The water dispelled during this period of introducing the fat is allowed to escape through the control valve 22 at the water outlet at the bottom of autoclave 13, at the same rate as that of the fat introduced, while maintaining the desired pressure inside the autoclave to prevent the superheated water from boiling. The apparatus is now in condition for continuous operation.

Both fat and water are now supplied to the autoclave continuously at a steady rate. By supplying tallow at a uniform rate of about 7500 pounds per hour in an apparatus of this size, and water at a rate of about 3500 pounds per hour, while maintaining a temperature of about 470° F. and a pressure of 600 pounds per square inch in the autoclave, the fat takes about one hour to pass through the autoclave, and is hydrolyzed to the extent of over 98 per cent, and usually about 99 per cent. The split fatty acids issue from the top of the autoclave through a suitable pressure controlling valve in a continuous stream. A more rapid passage of the fat and water through the described apparatus in the same relative proportions, taking for example 30 minutes instead of 60 minutes, would still give a high degree of hydrolysis, only a few per cent under that obtained in 60 minutes. The liberated glycerin is taken up by the water and leaves the bottom of the autoclave in a continuous stream in the form of a solution or "sweet water" which will contain approximately 24 per cent glycerin, if the original fat was of good grade, containing substantially its full complement of glycerin. In order to provide a rather prolonged contact of water with fat, the main body of the auotclave should preferably be kept filled with fat through which the water descends, and the interface between the fat and the accumulated "sweet water" should preferably be maintained in the apparatus described at a point about three feet above the bottom of the autoclave, or at about the level of the fat inlet 14. This level can be regulated by suitably controlling the flow of the fat and the water, and can be determined by use of suitable draw-off valves at various levels or by a liquid level gage.

The "sweet water" passes to the flask tank 17 where its pressure is released through a suitable valve to atmospheric pressure, whereby a portion of the water suddenly evaporates to steam with a resulting cooling effect so that the temperature drops to slightly more than 212° F. with a resulting concentration of the "sweet water" from a glycerin content of 24 per cent to approximately 32 per cent. The split fatty acids issuing from the top of the autoclave may, if desired, be passed to a flash chamber maintained at any desired lower pressure, where the pressure is reduced if desired through a suitable valve, but I prefer to pass the fatty acids without reduction of temperature or pressure directly to the mixer, as described below. The fatty acids while under the temperature and pressure stated, if derived from fats of the tallow class, contain approximately 11 per cent of water in solution, which, however, will partially flash into steam if the pressure is reduced, with a resulting cooling effect on the fatty acids, but ordinarily this entire moisture content is retained in the fatty acids as used in my preferred procedure.

Both the fatty acids and the dissolved water in same are substantially free from glycerin when the operation is carried out as described in an autoclave column of suffiicent height. Thus, in a column ten feet high, I find that the water which is dissolved in the issuing fatty acids contains about five per cent of glycerin; in a twenty foot column the water contains only about one per cent glycerin, while in a fifty foot column as described herein the water contains only about 0.1 per cent glycerin.

The fatty acids issuing from the autoclave 13 (containing dissolved water in amount depending on the temperature and pressure), and having a temperature above 212° F., preferably about 470° F., are then passed to mixer 30 through meter 29, while at the same time a solution of a saponifying agent, preferably caustic soda or soda ash in amount to properly saponify the fatty acids, continuously controlled by a suitable proportioning device, is likewise passed continuously into the same mixer by pump 31 from tank 27 through meter 28. Meters 28 and 29 enable the operator to control the flow of saponifying agent and fat in proper proportions as desired, or they may be suitably connected with pump 31 in an automatic proportioning device. When a built soap product is desired, the solution of builder may be added to the solution of saponifying agent, or it may be added to the mixer separately in properly and continuously proportioned quantities. The total amount of water introduced in the mixer is so regulated as to give the desired moisture content in the final comminuted soap product, after allowing for evaporation in the spray chamber. The total amount of water in the soap

(*Turn to Page 74*)

The Changing Trend in

SOAP BUYING HABITS

An analysis of consumer preferences in the Milwaukee market . . . . White laundry soap gains sharply in popularity . . . . Package soap flakes attain wider use . . . . Brushless shaving cream gains at expense of regular shaving cream . . . . Tooth powder and paste lose sales to liquid dentifrices . . . . Liquid shampoo popularity decreases slightly . . . .

A HUGE gain in consumer acceptance of white laundry soap, completely reversing the downward trend experienced by this product over a period of years, is among the most important trends indicated in the recent 1940 Milwaukee Market Survey.* A significant drop in the popularity of brown laundry soap this year shows a continued apparent shift in consumer buying habits. Soap granules and beads moved still further ahead, reaching a new high this year, while package flakes and chips also showed popular gains in the Greater Milwaukee market, more than compensating for the declining use of brown laundry soap.

Of the 197,092 families in Greater Milwaukee, 66.3 per cent are using white laundry soap in 1940 as compared with 55.2 per cent in 1938, which was the last year that this product was included in the annual Consumer Analysis. Twelve years ago, nine out of ten reporting families used white laundry soap but until this year its use had been declining steadily. "P. & G.," the number one brand shows a large gain in popularity from 59.6 per cent in 1938 to 64.5 per cent in 1940, representing a gain of nearly 22,000 new users. "Crystal White," in second place, maintains the same popularity held in 1938, namely 21.4 per cent, while "Ivory," in third place, decreased in consumer preference from 19.8 per cent in 1938 to 15.9 per cent in 1940. Because of the increase in the total number of white laundry soap purchasers, however, the actual number of "Ivory" buyers remains practically the same.

After being used by slightly more than 63 per cent of all families from 1935 through 1938, the popularity of brown laundry soap this year dropped to 58.4 per cent. "Fels Naptha" continues in first place, with a consumer popularity of 81.3 per cent this year, as compared to 80.5 per cent in 1938. "O. K." brown soap, in second place, is now preferred by 12.1 per cent of all buyers, as compared to 13.1 per cent in 1938. Third place goes to "American Family," with a gain in consumer preference from 5.1 per cent in 1938 to 5.7 per cent in 1940.

A survey of all families to determine the place where most of their laundry is "done," shows that in 90.7 per cent of the families it is done at home, 7.8 per cent send the "wash" out to commercial laundries and only 1.5 per cent have their work done by hand laundries or laundresses.

Package soap flakes or chips moved ahead appreciably this year, attaining distribution among 79.4 per cent of reporting families as compared with 76 per cent in 1939. A new leader is noted in this year's brand preference analysis. After maintaining about the same popularity for the past few years, "Lux" flakes mounted to 33.7 per cent of all buyers this year, thus taking over the number one position. Last year 27.5 per cent of all buyers preferred "Lux" flakes. Declining in popularity from 29.3 per cent in 1939 to 23.9 per cent in 1940, "John Hanser" soap flakes dropped to second place in preference. "Chipso" flakes moved to third place with a gain from 16.1 per cent of all buyers last year to 17.1 per cent this year. "Ivory" and "Clean Quick" appear in fourth and fifth positions with popularities of 16.8 per cent and 6.3 per cent respectively.

It is apparent that competition is becoming still keener in the granulated soap or soap bead field with eleven brands listed as preferred by more than one per cent of the total consumers, while only eight were listed in 1939. This year a new high has been reached with 155,111 families or 78.7 per cent of those surveyed buying soap granules or soap beads regularly. It is interesting to note that this gain has not been made at the expense of package soap flakes or chips. "Rinso" takes first place in the granulated soap classification, being preferred by 48.3 per cent of all buyers as compared with 49.6 per cent in 1939. Second place goes to "Oxydol" with a gain from 44.6 per cent of all buyers in 1939 to 45.5 per cent in 1940. Making an outstanding gain in popularity, "Super Suds" moved up to third place with a buyer

*Compiled annually by the *Milwaukee Journal*, Milwaukee.

preference of 20.4 per cent as compared to only 13 per cent in 1939. "Duz," a new product with an old name not seen in this market for many years, comes into fourth place with a remarkable popularity of 15.5 per cent, though only recently introduced. "Ivory Snow" and "Dreft" appear in the list in this order with consumer preferences of 11.6 per cent and 8.3 per cent respectively. "Vel," a new product of the Colgate-Palmolive-Peet Co., is listed with a consumer use of 5.7 per cent.

The universal popularity of toilet soap in Greater Milwaukee remains at 99.2 per cent this year; any change in the number of families using it is primarily due to changes in the population. This year for the first time, separate figures are available showing the brands of toilet soap used most for hands and face and those used most for bath. A total of 83 brands of toilet soap for hands and face were reported in use as of January 15, 1940. "Lux" is the most popular toilet soap for hands and face in Greater Milwaukee, being used by 26 per cent of all buyers. Second place goes to "Palmolive" with a consumer popularity of 21 per cent, while "Ivory," in third place has a consumer preference of 14.8 per cent. "Camay" with 14.6 per cent, "Sweetheart," with 9.7 per cent, "Lifebuoy," with 9.6 per cent, and "Woodbury's," with 4.1 per cent of all buyers are the major remaining contenders for this market.

Of the 78 different brands of toilet soap reported by housewives for bath use this year, "Lifebuoy" is the most popular in this market, with 30.8 per cent of all buyers using this brand regularly. Second place goes to "Ivory" with 19.5 per cent. "Lux," the leader among brands for hands and face, appears in third place in the bath soap listing with 17.4 per cent popularity. Fourth place is held by "Palmolive" with a consumer preference of 13.8 per cent, while "Camay" and "Sweetheart" are used by 9.4 per cent and 7.1 per cent of all buyers respectively.

AFTER continuing on a downward trend for a number of years, soap crystals and water softeners started on the upgrade this year with 31.8 per cent of all Greater Milwaukee families buying this type of product. Last year only 27.6 per cent of all families bought soap crystals or water softeners. "Climalene," the favorite brand in Greater Milwaukee, already in strong position, added more than 8,000 new users this year, moving ahead in preference from 53.6 per cent in 1939 to 59 per cent in 1940. Both of the grocery chains, A. & P. and National Tea, and better than nine out of every ten independent grocers in this area stock "Climalene." "No Name," in second place, increased in popularity from 9.4 per cent of all buyers in 1939 to 10.2 per cent in 1940. "Melo," although showing a decline in popularity from 6.5 per cent in 1939 to 3.4 per cent this year, retains its hold on third place.

For a number of years the general trend in the use of package scouring cleansers has been on the downgrade, and this year a further decline is noted with 86.5 per cent of all families buying scouring cleansers as compared with 88.5 per cent in 1939. Competition is becoming more active in this field, 39 different brands being reported in use this year as compared to 34 brands in 1939. Only cleansers with sifting tops are considered in this classification, bulk products not being included. First place among all brands goes to "Kitchen Klenzer" with a popularity of 37 per cent in 1940, as compared to 37.5 per cent in 1939. "Old Dutch" continues in second place although declining from 27.3 per cent of all buyers in 1939 to 23.9 per cent in 1940. "Gold Dust," in third place, is preferred by 8.4 per cent of all buyers this year as compared to 9 per cent in 1939. "Sunbrite" runs a close fourth with a gain in popularity from 7.5 per cent in 1939 to 8.1 per cent this year. "Brite-Ize," "Bon-ami," "Bab-O" and "Lighthouse" appear in the order named with popularities ranging from 6.4 to 4.2 per cent.

After steadily gaining in popularity since 1936, the percentage use of bottled bleaching fluid began to level off this year. Last year 71.1 per cent of all Greater Milwaukee families used these products, as compared to 70.2 per cent or 138,359 families in 1940. Data was obtained showing the size unit usually purchased. The larger sizes increased in popularity while the smaller sizes show a decline. It is evident that many more private brands of bleaching fluid have come into the market since 1939, as 103 brands were reported in use this year, compared to 86 brands reported a year ago. "Hilex" retains top position with a popularity of 35.3 per cent this year as compared to 39.3 per cent in 1939. Advancing in preference from 9 per cent of all buyers in 1939 to 12.3 per cent in 1940, "Mag" moved into second place. "Wonderene," dropping into third from second place with 11.8 per cent use, shows practically no change in consumer preference. "Linco Wash" has dropped from third to fourth place, with a decrease in consumer use from 10.4 per cent last year to 7.5 per cent in 1940.

IN THE Greater Milwaukee Survey this year, for the first time, housewives were questioned on the package soap products they used most for general household laundry, for fine fabrics, for dishes and for washing painted walls and woodwork.

For use in household laundries, "Oxydol" takes first place, being used by 22.1 per cent of all families who buy soap products for this purpose. "Rinso," a close second, is preferred by 21.6 per cent of all buyers. "John Hanser's Flakes," "Fels-Naptha Bar Soap," "P. & G. Bar Soap" and "Chipso Flakes" follow in popularity in the order named.

"Lux Flakes" is, by far, the most popular brand used for fine fabrics, being used regularly by 48.6 per cent of all families who buy soap products for this purpose. Second place goes to "Ivory Flakes" with a consumer preference of 14.3 per cent. "Ivory Bar Soap," "Dreft" and "Ivory Snow" come third, fourth and

fifth, with popularities ranging from 7.2 to 6.3 per cent.

For washing dishes, "Ivory Bar Soap" and "Rinso" are the most popular soap products in Greater Milwaukee, running neck and neck with consumer preferences of 14.1 and 14.0 per cent respectively. Third place goes to "Oxydol" with a popularity of 11 per cent. "Super Suds" and "Ivory Flakes" are tied for fourth place, each being preferred by 8 per cent of all buyers.

For use in cleaning walls and woodwork, "Climalene" is the most popular soap product in this district, having a consumer preference of 11.6 per cent. "Oxydol," with 11.2 per cent, "Ivory Bar Soap," with 10 per cent and "Rinso" with 9.2 per cent of buyer popularity are the other preferred brands in Greater Milwaukee.

An increase in consumer use of liquid window cleaners is noted this year with 28.2 per cent of all families buying this type of preparation. Only cleaners specially prepared for cleaning windows are included under this heading. "Windex" continues to dominate in this field, being preferred by 71.2 per cent of all buyers, as compared to 73.2 per cent last year. "Aero-Mist" advanced in popularity from 8.2 per cent in 1939 to 10.3 per cent in 1940. Third place goes to "A-Penn" with a gain in consumer use from 1.1 per cent in 1939 to 1.8 per cent this year. During the year ending January 15, 1940, families buying liquid window cleaners used 3.6 bottles or cans, as compared to 3.5 bottles or cans used during the preceding annual period.

The Milwaukee market for regular shaving cream has decreased steadily over a period of years, but it is interesting to note that shaving soap is still twice as popular as brushless shaving cream. This year 42.9 per cent of all men, 18 years or over, buy regular shaving cream as compared to 44.4 per cent in 1939. First place in consumer popularity goes to "Palmolive," used by 37 per cent of all buyers as compared to 38.3 per cent in 1939. "Lifebuoy" strengthens its second place position with a gain from 21.9 per cent in 1939 to 23.2 per cent in 1940. "Williams," in third place, is preferred by 12.8 per cent of all users with little change in popularity.

Despite the steady increase in the number of electric razor users, brushless shaving cream has mounted in popularity this year to 20.6 per cent of all men in this market, as compared to the figure of 18.9 per cent in 1939. This year's percentage popularity is the highest ever recorded. Men who buy brushless shaving cream used 6.6 tubes or jars per year during the year ending January 15, 1940, as compared to 6.2 tubes or jars per year for the preceding period. "Barbasol" again holds top position in this group, with a gain from 20 per cent of all buyers in 1939 to 21.1 per cent this year. "Burma Shave," in second place holds about the same popularity recorded last year, 18.6 per cent. "Molle," jumping into third from fourth place last year, is the favorite of 17.1 per cent of all users.

APPARENTLY the introduction of liquid dentifrices has had an effect on the use of both tooth pastes and tooth powders this year, as both products diminished in consumer use. The decline in tooth paste use this year, however, is not as great as in past years. In 1938, 65 per cent of all Greater Milwaukee families purchased tooth paste and the use dropped to 60.8 per cent in 1939. This year 59.2 per cent of all families bought tooth paste regularly. Use of this product has remained steady at two tubes per family per month during the past four years. "Colgate," the leading brand, continues to increase in popularity with a gain from 24.5 per cent of all buyers in 1939 to 25.6 per cent in 1940. "Pepsodent" remains in second place with an increase from 17.9 per cent in 1939 to 19 per cent this year. "Ipana" holds steady in third place with a consumer preference of 14.7 per cent.

After continuing on an upward trend over a long period of years, a decline is noted in the use of tooth powder this year. In 1939, the popularity of tooth powder reached a high of 58.9 per cent, while this year it is used by only 52.4 per cent of all families. The monthly use of tooth powder has remained exactly the same for the past four years, 1.4 cans per family. "Dr. Lyon's" remains a strong first in popularity, being preferred by 59.5 per cent of all buyers this year, as compared to 59.1 per cent in 1939. "Colgate" moves from third to second place with a gain from 6.7 per cent of all users in 1939 to 8.1 per cent in 1940. "Pepsodent," in third place has a consumer preference of 7.5 per cent.

Covered by the Consumer Analysis for the first time since 1929, liquid dentifrices have soared into popularity this year. More than 45,000 Greater Milwaukee families or 22.9 per cent of the total number buy liquid dentifrices. "Teel" dominates the field with 92.8 per cent of all buyers preferring this brand. Second place goes to "Pepsodent," and third place to "Cue," with 4.2 and 3 per cent of buyer popularity respectively. Monthly use of this type of product is 1.5 bottles per family.

Liquid mouth wash use remained virtually the same as last year, namely 57.8 per cent of all families. "Listerine" is in first place with a consumer popularity of 50 per cent. Second place goes to "Lavoris," a favorite of 13.6 per cent of all buyers, while "Thymo-Borine," in third place has a preference of 9.9 per cent. Average monthly consumption per family remains at 1.2 bottles.

Liquid shampoo diminished slightly from last year's high popularity of 49.1 per cent to 47 per cent in 1940. The number of brands in use shows another large increase this year. Apparently many beauty parlors are selling liquid shampoo under their own private labels. A new high figure of 193 different brands is reported this year. "Drene" retains first place, although decreasing in popularity from 42.5 per cent in 1939 to 32.7 per cent in 1940. "Fitch's" moves from third to second place with a marked gain in consumer use from 10.4 per cent in 1939 to 17.2 per cent in 1940. "Watkins" is preferred by 16 per cent of all buyers this year.

Camphor an

The distillation of camphor in the mountains of Formosa, and separation of the oil from the gum, is a crude operation. View of camphor distilling plant with outside cooling vats.

OUT of the Orient have come to us most of the aromatic gums and spices, which, from their universal appeal, have for ages been the materials of a profitable commerce. Of these, camphor is one of the oldest of which we have any record. From historical data collected by Dr. Friedrich Hoffmann, we may note that it is mentioned in Chinese literature of 300 B.C. Arabic writers of the 6th century mention the use of camphor in medicine. It was known in Europe in the 11th and 12th centuries. Marco Polo in the 13th century describes it as coming from Sumatra and Borneo. At this period, it was probably confused with the Borneo or Baros camphor, which is really borneol, the alcohol corresponding to camphor. The oil of camphor appeared first in Europe in 1884 and the commercial extraction of safrol began shortly after. The use of the oil in this country dates from 1893.

The camphor tree is found almost exclusively in Formosa, Japan and Southern China. It is a large, but not tall tree which may reach an age of 50 to 100 years, and old trees may have a circumference at the base of 20 to 30 feet. All parts of the tree contain camphor and oil, the roots having the highest content, which may reach 5 per cent.

Many attempts have been made to introduce the culture in other parts of the world, such as Ceylon, India, the Philippines, Algeria, Italy, Florida, etc., where the climate and soil seemed to be favorable. These efforts do not appear to have been conspicuously successful, for a variety of reasons. Young trees contain too little camphor. In fact, it was found advisable in Formosa to work only on trees at least 50 years old. Obviously also very cheap labor is required. In Florida a further difficulty arose with an insect infection which could not be controlled. The increasing competition with artificial camphor also made the culture commercially unpromising, one reason lying in the fact that in order to obtain the camphor, the tree must be destroyed, whereas in the production of turpentine, which yields the artificial camphor, the pine trees may, under proper methods of collection, continue to yield their secretion for years and ultimately be still valuable as timber.

For the distillation of camphor, the wood is cut and chipped in a primitive way by hand labor, and boiled up with water in primitive stills. The design of a suitable condensing apparatus taxed the ingenuity of the natives. The crude condensers in use in the distillation of cassia and anise oils were not practical, owing to the high melting point of the camphor which soon choked up any tubular condenser. In China, the distillate from the very primitive stills was condensed in inverted earthen pots: a wasteful arrangement in which the camphor *oil* was lost.

The Japanese employed a long rectangular box partially divided into cells by partitions, through which the vapors passed successively, the cover and sides of the box being cooled by running water. In this way both camphor and oil are collected and the crude products are then shipped to a central distillery where the final separation is effected.

Gum camphor is found in all parts of the tree, but mostly in the lower parts, the amount increasing with the age of the tree.

The relative amounts of camphor and oil seem to vary. The root wood contains the largest amount of oil, up to 5 per cent. Leaves and twigs contain much less, both of camphor and oil, and oil from the leaves is said to contain no safrol. The yield of camphor and oil from a Japanese still is reported as 8 to 10 pounds per day;

...or and CAMPHOR OIL

By Dr. Francis D. Dodge

Dodge & Olcott Company

from a group of 10 Chinese stills about 5 to 8 pounds per day. Another estimate is a yield of 1.5 per cent camphor and 0.7 per cent oil. But accurate figures of yields and production seem to be unavailable.

The average annual production, 1900-1925, was reported as

	Pounds
Formosan Camphor.....	4,380,000
Formosan Camphor Oil.	6,010,000
Japanese Camphor.....	1,600,000
Japanese Camphor Oil..	2,070,000

For Chinese production, no figures are available.

The crude camphor oil, separated mechanically from the crystals of camphor, seldom appears in commerce, but is fractioned in Japan or Formosa into white oil with S.G. 870-900 and brown oil S.G. 1.000-1.030, which have been exported for some fifty years to the United States, Germany and elsewhere, where they are further worked up for the products most in demand.

Composition of Camphor Oil

LIKE most essential oils which have been carefully examined, camphor oil is found to be a very complex mixture of compounds. Some 36 individual constituents have been isolated and identified and no doubt many more are awaiting recognition as our methods of separation are improved.

The white oil is a mixture of terpenes and cineol and generally small amounts of terpineol, borneol and camphor. It has been found useful in paints and lacquers, where its superior solvent properties made it preferable to turpentine or petroleum distillates. The heavy brown oil contains principally safrol, the same phenolic ether to which the sassafras bark owes much of its characteristic odor and taste.

In this country the brown oil has generally been processed for the following products:

Cheap labor makes possible the low-cost production of camphor and camphor oils in Formosa . . . primitive method of chipping camphor logs by hand in preparation for distillation.

1. Oil Sassafras Artificial S.G. About 1.070

This oil, containing safrol, terpineol, camphor, sesquiterpenes, etc., is almost identical in composition with the natural oil from sassafras bark, and has found large use as a cheap perfume for soaps. As the oil contains only small amounts of aldehydes and phenols, it is not likely to cause discoloration of soaps. Owing to its high content of safrol, the oil crystallizes at about 6° C. (42° F.) and the determination of the congealig point is a useful check on the quality.

2. Oil Camphor Sassafrassy S.G. About .970

Contains about 25 per cent safrol, the balance consisting mainly of terpineol, borneol camphor, sesquiterpenes and sesquiterpene alcohols. This product has also been popular as one of the cheapest perfume materials for soap, polishes, sprays, etc. Owing to the preponderance of high boiling constituents the aroma is different from that of the 1.070 oil and rather more permanent.

3. Safrol

The commercial product has S.G. 1.102 to 1.104. It is colorless when freshly distilled, but gradually darkens on exposure to light and air. For supplying the characteristic sassafras aroma and flavor, safrol is not as satisfactory as the 1.070 oil, the latter resembling more closely the natural oil.

In addition to its use as an aromatic, safrol is important as raw material for the manufacture of piperonal, the commercial "heliotropine." It may also serve as a source of vanillin, but the processes involved are rather complicated and under present conditions not commercially interesting.

The last high boiling sections from the fractional distillation of camphor oil often have a strong blue color. This is due to the presence of a unique hydrocarbon, discovered and isolated in our laboratory in 1915 and called "azulene." It has the composition $C_{15}H_{18}$ and the remarkable property of dissolving without change in certain mineral acids, which property can be used for its extraction and purification.

Azulene has also been found in some other oils, such as chamomile and wormseed, and may be made by the dehydrogenation of certain sesquiterpenes. It may be distilled in vacua, the vapors having a strong blue color, but it resinifies quickly even in sealed tubes in vacua.

The crude camphor oil also contains a small amount of phenols, among which eugenol, carvacrol and cresol have been identified. The odor of the mixed phenols is unpleasant and their removal is generally necessary.

Adulteration

ADULTERATION of camphor oil has seldom been observed, as it has, up to recently, been a relatively cheap product, and for the brown oil, no cheap adulterant with high specific gravity has been available. Low gravity oils of inferior quality have at times appeared which seemed to have been diluted with by-products of various kinds and showed a low safrol and camphor content. Years ago both the white and brown oils contained much more camphor than of late, which no doubt is due to improvements in fractionation.

At the beginning of the century, the Japanese enjoyed a practical monopoly of the camphor production and when the island of Formosa came into their possession, the industry in Japan and Formosa was organized as a state monopoly. As a natural result the prices of camphor products were forced upward, which in turn led to increased development of the manufacture of camphor from turpentine, and also, for a time, to increased production in China.

At the present time prices of natural gum camphor are regulated by that of the artificial product which is steadily increasing in production and cheapness. For the manufacture of certain plastics of the celluloid type, camphor still appears to be indispensable.

At present, owing to the exigencies arising from the war in China, further restrictions have been placed on the export of camphor products. Supply and quality will probably be uncertain for some time.

Other Varieties of Camphor Oil

BESIDES the normal camphor oil previously described, other varieties have appeared in the market, the origin of which is still somewhat obscure. Apparently the true *Laurus camphora* tree under certain conditions will yield oil containing little or no camphor. Under the names "Yiu-ju," "Schiu" and "Ho" oil, products have appeared of a quite different composition.

Yiu-ju oil contains most of the constituents found in ordinary camphor oil but with cineol predominating. As to Schiu and Ho oils, which generally contain much linalool and relatively little camphor, it appears probable that these are not authentic oils, but rather the results of fractionation. As cheap sources of linalool, these oils have found considerable use, but the presence of small amounts of camphor is for many purposes objectionable.

Because of their low cost and relatively good perfuming properties, the various derivatives of camphor oil find wide use in the perfuming of soap products, insecticides, and numerous other chemical specialties, and as the basis for other perfuming compounds for use in numerous materials where the cost of odor must of necessity be held at low levels.

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An aqueous emulsion of a wax such as yellow carnauba wax is formed by using as an emulsifying agent a morpholine compound with a fatty acid of high molecular weight such as oleic acid. In this way the wax is dispersed in such small particle size that it will dry bright or with substantial luster when merely applied to a surface and exposed to the atmosphere without rubbing. The emulsifying agent is decomposed during drying of the composition so that the composition loses its ability to re-emulsify with water. Homer C. Brumbaugh. U. S. Patent No. 2,177,240.

SYNTHETIC DETERGENTS...

The Lamepons . . . start of their manufacture in the U. S. opens a new chapter in non-soap detergents . . . their composition, character and uses.

ALTHOUGH they have been manufactured commercially in Germany for the past five years, the recent undertaking of production in the United States of the Lamepons has focused greater attention upon this group of aliphatic protein condensates and their wetting and detergent properties. Coincident with the expansion of interest in various alkyl sulfonates, sulfated fatty alcohols, and other organic detergents in the United States, application in Europe of newer wetting agents has also included the Lamepons. Research in these latter dates back prior to 1930, while the first German and American patents covering their application were filed in 1932.

The Lamepons of which there are a number of slightly varying chemical composition, are high molecular weight protein derivatives coupled with fatty acid derivatives by the Schotten-Baumann reaction. In this way, high molecular amino acids are converted into substitution products in which one hydrogen atom is replaced by the acid radical from a higher fatty acid. The general process of manufacture and various applications are covered by a series of patents, notably U. S. No. 2,015,912, and others.

For years, it has been known to textile dyers that baths in which wool or silk have been treated, acquire a certain levelling and fiber protective action because of their content of protein derivatives derived from the fiber substance. For some time, this action has been secured artificially by the addition of glue. Still better protective action, however, is obtained by the use of high molecular protein derivatives, for example, protalbinic and lysalbinic acids. The main reason why such products do not find use as general textile assistants is their lack of properties which are essential in modern textile assistants, notably capillary activity. It is this latter activity which covers a number of phenomena among which are washing, wetting, foaming, levelling, and emulsifying. By combining protein derivatives with fatty acids by the Schotten-Baumann reaction, the desired properties are acquired.

Commercially on the American market, several types of Lamepons representing modifications of the same product are available. They are all pale brown oily liquids with specific gravities ranging from 1.15 to 1.28, supplied in concentrated water solutions and generally used in high dilution. Their widest use in Europe has heretofore been in textile processing and the particular Lamepon most commonly used for this purpose has been alkaline with a pH of 8. This same type is also used for the manufacture of industrial detergents, general household washing compounds and the like. Another type of Lamepon with a pH of 6 is used as an additive in toilet soaps, in shampoos, and as a base for certain cosmetics, dentifrices, etc. where detergent and foaming action is required, even in the presence of lime. The pH of the Lamepons can be adjusted from pH 5 up to any degree of alkalinity.

In use as a textile agent, the Lamepons have various properties differentiating them from other synthetic organic detergents. They are stable to alkalies such as soaps, soda ash, and phosphates, and to bleaching agents such as chlorine and peroxides, and can be used simultaneously with them in processing. They are also stable for a limited time in hot water solutions above 250° F., although gradual dissociation takes place due to the effects of heat and alkali. In acid media below pH 5, they precipitate without decomposition.

Although some other organic detergents have a more efficient detergent action than the Lamepons, the latter have the advantage of combining wetting power with strong emulsifying ability, and chiefly of capillary activity without impairing the textile fibres on which they are used. They also have the properties common to some non-soap detergents of dispersing lime and magnesium soaps, removal of lime deposits, and the ability to lather freely in the presence of lime and other salts. Their lime dispersion powers increase in the presence of greater concentrations of alkali while those of most other wetting agents decrease under these conditions.

The indicated protective action

(*Turn to Page* 67)

New Products and

Soap-O-Lene, Inc., Morgantown, W. Va., has just introduced a new scouring abrasive "Soap-O-Lene Cleanser". The can is made by Sefton Fibre Can Co., St. Louis. Label printed by Koelle Meuller Label Co., St. Louis.

A new addition to the Shinola family of Hecker Products Corp., New York, is this liquid shoe dressing for children. It is packed in a non-tippable bottle and the top is equipped with an applicator swab.

"Hydro-Pura" water softener, a product of Schalk Chemical Co., Los Angeles, is now being featured on the Pacific Coast as a household cleaner. The package was designed by Fred Glauser, art director of Erwin, Wasey & Company.

Packages

Luxor, Ltd., Chicago are introducing an unusually shaped, streamlined bath soap, "Savon Sachet," that is offered in four odors,—pine, carnation, lilac and apple blossom. Four cakes sell for a dollar.

Superior Soap Corp., Brooklyn, is now marketing "Sta-Brite" liquid floor wax in a new can. The lithographed container is in two colors, yellow on the upper section and black on the lower part.

A. R. Winarick, Inc., New York, have adopted a new counter display for "Jeris" shaving cream. The display is enclosed in an outer carton, and holds twelve tubes of shaving cream. It is made by Robert Gair Co., New York.

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DISODIUM PHOSPHATE
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iEi

EASTERN INDUSTRIES, INC.

RIDGEFIELD· N. J.

News....

Finkel Joins Quaker

Daniel E. Finkel, previously plant and development chemist for Armour & Co., and until recently with Olive Oil Soap Co., Paterson, in their technical sales department, has joined Quaker Chemical Products Corp., Conshohocken, Pa., as technical sales representative to the textile industry in the metropolitan New York and New Jersey area.

Soap Makers to Can Soup

I. Rokeach & Sons, Brooklyn manufacturers of soaps and scouring powders, have bought the Farmers' and Packers' plant in Farmingdale, N. J., for the establishment of a new business in the canning of soups and other food products. About seventy-five persons will be employed in the Farmingdale plant. Soap production will continue to be centered at the Brooklyn plant.

P. & G. Host to I. R. I.

A tour through the Procter & Gamble Research Laboratories and plant at Ivorydale, Ohio, was a feature of the second annual meeting of the Industrial Research Institute, April 26-27. Dr. R. S. Uhrbrock of the industrial relations division of Procter & Gamble Co., led a discussion on the subject "Selection of College Graduates."

Manhattan Signs First Lady

Mrs. Franklin D. Roosevelt inaugurated Manhattan Soap Co.'s radio program, "Sweetheart Toilet Soap Presents Eleanor Roosevelt" on Tuesday, April 30. This was the first of a series of programs featuring Mrs. Roosevelt, which will be heard on Tuesdays and Thursdays for the next thirteen weeks. Politics excluded. Mrs. Roosevelt may speak on any subject she selects,—principally topics of interest to women. She will presumably be paid by Sweetheart Soap her standard rate of $3,000 per 15-minute broadcast. Mrs. Roosevelt has been

Mrs. Franklin D. Roosevelt

a frequent speaker on commercially sponsored radio programs since 1932. She has worked for Simmons mattresses, Johns-Manville building materials, typewriter manufacturers, Selby shoes and Pond's cold cream. She has repeatedly stated that she uses such income for charitable purposes, with the beneficiary sometimes made public, sometimes not.

New Varela Soap Plant

Varela L. Hermanos of Cali, Colombia, are installing new equipment in their soap plant in that city and will engage in the manufacture of toilet soaps. Their operations have heretofore been confined to laundry soap manufacture. W. A. Mott of Detroit, who has spent many years in South America as superintendent and instructor in soap plants, is supervising the installation of the new equipment and will direct operations of the factory for a year until it gets well under way. Houchin Machinery Co. of Hawthorne, N. J. are supplying the new equipment for Varela.

Amend Liquid Soap Spec.

The Federal Specification for liquid toilet soap (P-S-618) has been amended in regard to odor, color and consistency under the section on general requirements, as follows: "The odor shall not be objectionable in the soap as received or in a hot solution of the soap in water. The material shall not leave any objectionable odor on the skin or other surfaces after washing with a water solution of the soap and rinsing thoroughly with plain water. Unless otherwise specified each bidder shall submit with his proposal a one quart sample, placed in a screw-top jar, to show odor, color, and consistency. The sample so furnished shall be kept for comparison with samples from deliveries." This amendment is to become effective not later than June 1, 1940.

Issue Hotel Cleaning Booklet

"Soap and Cleaning Methods in Hotels" is the title of a 30-page booklet issued by the American Hotel Association, New York, N. Y., prepared under the supervision of the organization's research committee. The text was written by George H. Edwards, technical consultant. It is being recommended to association members as a work "to be studied and kept close at hand when the matter of selection and use of soaps is under consideration."

P. & G. Starts Texas Plant

Contracts for construction of buildings and installation of equipment for its new $1,000,000 soap and soap products plant at Dallas, Texas, have been awarded by Procter & Gamble Co., Cincinnati. Engineering details will be handled by the company's staff. Field work was scheduled to start May 1. The main building will be 120 x 300 feet, seven stories high and of heavy flat slab

concrete construction. A facilities building for operating and maintenance departments and several other equipment and controlling features are included in the layout. The old office building will be remodeled and enlarged for use of both plants; the present power plant will be revised with installation of high-pressure boilers and turbines.

Cite Lechler Laboratories

Edwin Lechler, trading as Lechler Laboratories, New York, has been charged by the Federal Trade Commission with misrepresentation in the sale of soap. It is said that the product in question, "Curl-A-New" soap was advertised as containing substances which make straight hair curl, "preserve" natural curls, train the hair to curl and bring out curls or waves which "are asleep in the hair," when the use of the product will not accomplish any of the other things claimed for it than might be expected from use of a good quality of ordinary soap.

Kraft Corp. Moves

T. F. Kraft Corp., Los Angeles, soap distributors, have moved their office and warehouse operations to Overland Warehouse at 1807 E. Olympic St.

Soap Men at ACS Meeting

Five Procter & Gamble Company men held committee chairmanships in connection with the 99th meeting of the American Chemical Society in Cincinnati on April 8-12. Procter Thomson, head of the standards department of the chemical division, was general chairman; N. Beverley Tucker, research chemist, was chairman of the subscription dinner committee; Arnon O. Snoddy, research chemist, was chairman of the entertainment committee; John T. R. Andrews, research chemist, was chairman of the registration committee; Dr. Daniel J. Kooyman, research biochemist, was chairman of the publicity committee. Wilmer C. Gangloff, chemical director of the Drackett Chemical Company, headed the finance committee. Dr. Alfred Springer, dean of Cincinnati chemists, was honorary chairman.

R. B. Brodie, vice president in charge of manufacturing, was another interested auditor from the P. & G. Ivorydale plant, which was one of a number of industries visited on April 10 by a large party of chemists.

Fortune Tells Schultz Story

William Lightfoot Schultz and the outstanding success that his company, Shulton, Inc., New York, has achieved with the Early American Old Spice line of toiletries are the subjects of an interesting article in the April number of *Fortune* magazine. Mr. Schultz organized his first company, Lightfoot, Schultz Co. in 1909, specializing in the private label field. After operating for a number of years with considerable success, he eventually sold control of the business to the American Safety Razor Corp., for whom he had been making shaving sticks. He remained as president until 1933, when he resigned and started the Shulton Co. A line of soap bars stamped out in the shape of the Three Little Pigs and a later one based on the Alice in Wonderland story were popular novelties produced by the company in its early days.

Still doing most of his business in private label goods to keep things going, Mr. Schultz was always searching for a line with which he could go to the public under his own name—and at last he found it, by going back two hundred years into American history. Under the name "Old Spice," and in a package of old colonial pattern, the Shulton company brought out a $1 men's package containing two big bars of soap, the first of the Old Spice line of toiletries. On very limited capital, but with the aid of quaint, old-fashioned packages and bottles designed by Mrs. Enid Edson, a spicy perfume, reminiscent of the good old days (supplied, incidentally, by Dodge & Olcott) and backed up by that intangible asset, old-fashioned prestige, Old Spice grew from a gamble in 1937 to gross $3,100,000 sales in 1939.

The Old Spice line, in the beginning, consisted of soap, toilet water, perfume, bath salts, dusting powder and one combination package, the vanity box, which sold for $3.50. In the Spring of 1938 the expansion of the company began, chiefly with the addition of a men's line which quickly outdistanced most of Early American's predominately feminine items. The most striking item was shaving soap in an attractive gift shaving mug, marked with the reproduction of a trading ship. Mr. Schultz does no manufacturing himself, but continues to have his line made by the same manufacturers who gambled on his judgment back in 1937. Most of the Early American packaging is done in his Hoboken plant and there his assembly lines are located.

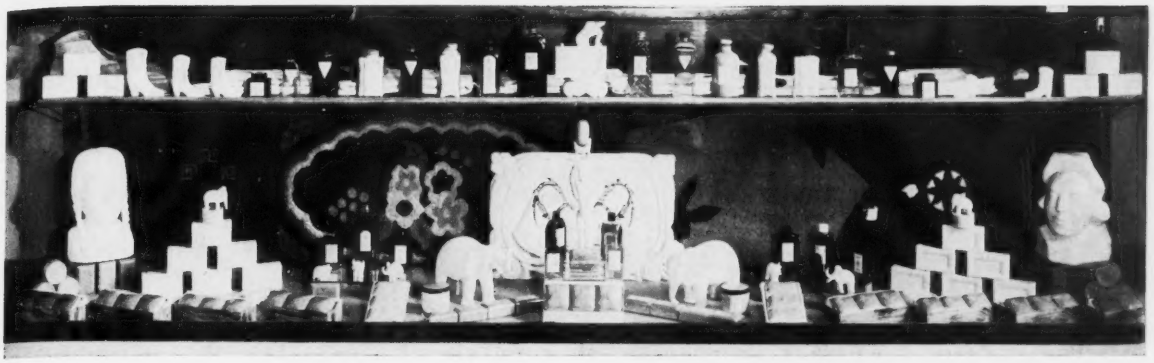
An interesting testimonial to the success of the Old Spice line and a reminder that, after all, imitation is the sincerest form of flattery, comes in a review of the changing packaging trend of some of Mr. Schultz's competitors. A number of them have gone in for extensive package redesign over the past year or so, and the early American or colonial influence has proved to be a surprisingly strong one.

Open New Offices

Maison G. deNavarre Associates, consultants to the drug and cosmetic industries, Detroit, formally opened their new offices and laboratories, at 14934 Harper Ave., Detroit, on April 13. Maison G. deNavarre, Frederick Mittelstadt and Ralph J. Mill were hosts to friends in the trade.

C. L. Drum Heads Chicago Assn.

C. L. Drum of Owens-Illinois Glass Company's Chicago office was elected president of the Chicago Drug and Chemical Association at the recent annual election. He succeeds Elmer F. Smith, of American Aniline Products Co., retiring president. John A. Scott of Merck & Co., was elected vice president, J. M. Gillett of Victor Chemical Works was re-elected treasurer, and Walter R. Ney of Malinckrodt Chemical Works, secretary. New directors chosen for two years



Display of soaps and toilet articles manufactured at the Colorado State Penitentiary at Canon City, Colo., including soap carvings. More than fifty items are manufactured in the prison soap plant.

include: Robert O. Hereford, of Kimble Glass Co.; Joseph P. Sullivan, of E. I. du Pont de Nemours & Co.; Dale F. Ruedig of Eli Lilly & Co., and Arthur C. Drury of A. C. Drury & Co. Holdover directors include: H. F. Woulfe, Pepsodent Co.; George A. Wrisley, Allen B. Wrisley Co.; R. C. Jennings, New York Quinine & Chemical Works; Wm. F. Bahe of Parke, Davis & Co.

Sells Fake "Borden" Soap

A super soap salesman of the old school is now working the old "free sample" game at the back doors of houses in the Chicago district, attempting to cash in on illicit use of the well-known Borden (dairy) name. Our Chicago correspondent who happened to be on the receiving end of the salesman's high pressure line, reports his selling methods to be very much as follows. He leads off by giving his victim a "free sample" of "E-Z-Y" borax soap powder for laundry use. Then he gets out a carton of "Sweet Milk Soap-Skin Improver" —which he describes as made from Borden's pasteurized milk, containing three cakes for 75 cents. To make his offer still more attractive, he adds two more free samples. If the prospective customer still hesitates, the salesman doubles his offer, piling up six free sample boxes of powder and six cakes of soap all for the original price of 75 cents. Of course, if he doesn't make the sale, back into his case go all the free samples. The soap bears the name "Interstate Brands," Interstate Distributing Co., Cincinnati and Dayton, O. Borden Co. disclaims any connection with Interstate Brands but would like to locate the person responsible for the unauthorized use of the Borden name.

Display at Rotary Exhibition

J. L. White Co., Chicago, and Kelite Products, Inc., Los Angeles, were among the exhibitors invited to display their products at the recent Chicago Rotary Club's annual Exposition of Business Progress held April 9 to 12. Exhibitors appeared by invition, one concern from each field of business represented in Rotary's membership being admitted. "Kelite Ketrex," "Super-Ketrex" and "Kelite Protexol" were shown among many other new developments of soaps, detergents, waxes and polishes for meeting cleaning problems in the aircraft and automotive industries. Attention was also given to compounds for cleaning new construction materials such as new metal alloys and plastics.

P. & G. Earnings at Peak

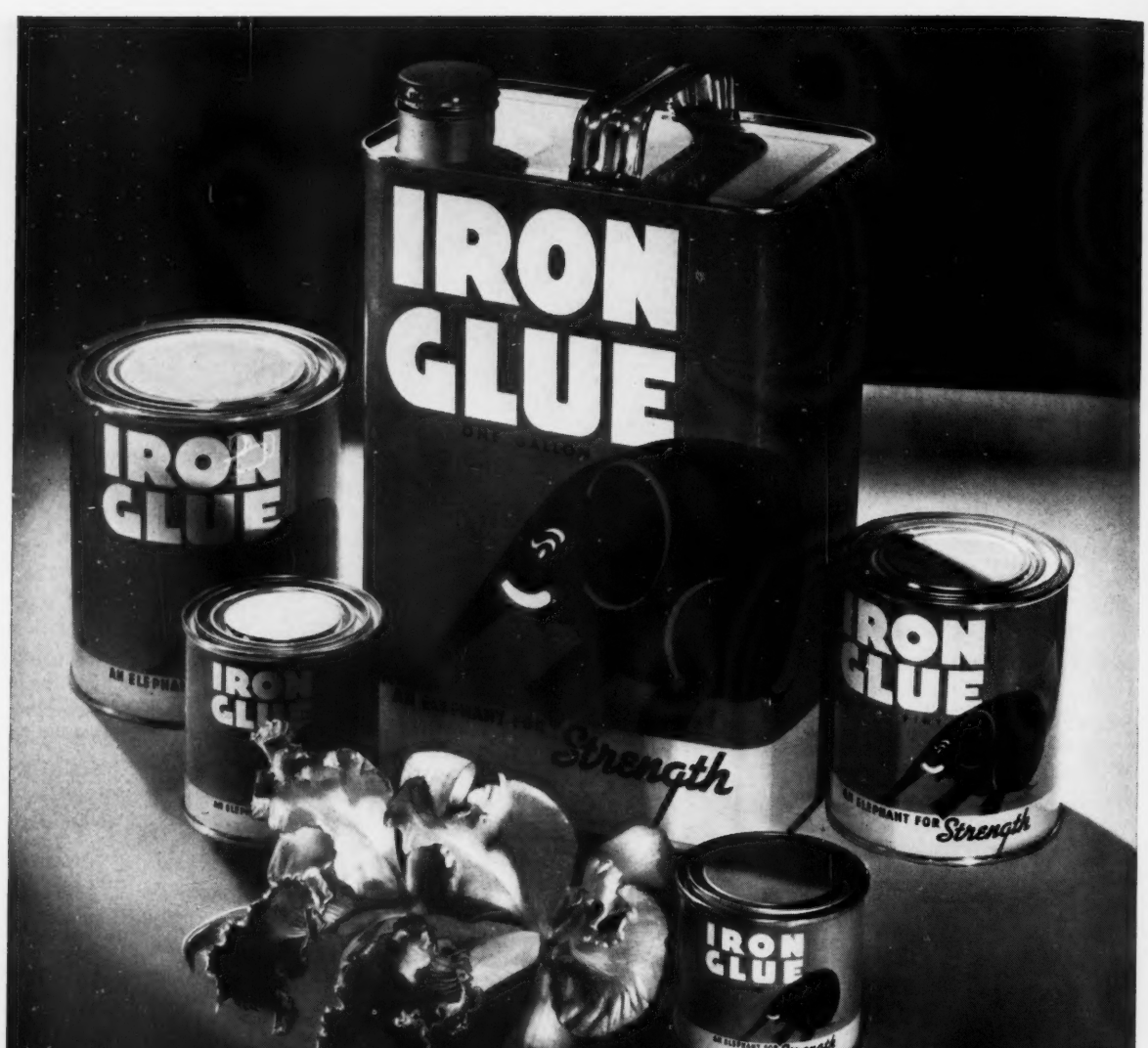
Representing the largest income for any similar period in the company's history, Procter & Gamble Co., Cincinnati, announced on April 22, consolidated net earnings of $22,273,148 for the nine months ended March 31, after provision for all taxes. Earnings on common stock outstanding were equal to $3.405 a share; this compares with net earnings of $18,469,039 for the corresponding period last year, or $2.80 a common share. For the three months ended March 31, consolidated net earnings were $7,686,610, or $1.118 per common share; this quarter was second largest for any similar period, being exceeded only in the third quarter of 1936-1937, when the earnings were $8,198,489 or $1.26 a common share. The latest report again excluded earnings of subsidiary companies in England and Canada, following the policy established at the outbreak of the new European war.

No-Soap Corp. Formed

No-Soap Corp. of America, New York, has recently been incorporated. The company will manufacture a soapless cleanser in powder form at a factory at 115 Watts St.

Reports for British Soapers

Germans may be on soap rations, but Britons will continue to raise a lovely lather in their daily baths, according to H. W. Remington, director of foreign sales for the Colgate - Palmolive - Peet Company, who is visiting Canada. His company has been forced to strike its Hamburg, Germany, plant off the lists of assets, and has lost an extensive Danish market through Hitler's Scandinavian drive. Mr. Remington said, but he feels confident that there will continue to be a sufficient supply of fats and oils in Great Britain to take care of Briton's baths. At present soap factories in Britain are given supplies of fats and oils according to previous requirements, and although the Colgate-Palmolive-Peet plants could sell more soap if they could get more raw materials, Mr. Remington says world



OUR CUSTOMERS RATE THE ORCHIDS

ANOTHER MAJOR AWARD for an outstanding job of packaging goes to a Canco customer. This time to McCormick & Co., for their new line of lithographed IRON GLUE containers.

This line of cans won top honors in the Metal Container Group of the 1939 All-America Packaging Competition. And *five* other major awards in different classifications also were won by our clients.

We consider it a privilege to have worked with the companies who won these awards. and feel as pleased as if the honors came to us direct.

Likewise it is gratifying to note that there were more than 30,000 separate entries in this past packaging competition. compared to 271 in 1931.

This shows a significant trend towards the packaging of almost every product in modern business. If you are considering the pros and cons of packaging in *your* business, we should like to talk it over.

CANCO

★ AMERICAN CAN COMPANY ★

230 PARK AVENUE • NEW YORK, N. Y.

business is holding up very well. The company's plant in Hamburg formed an important part of the soap-making machinery in Germany, but it has been taken over by the government, he says.

Distribute "Climalene" Samples

Climalene Co., Canton, O., recently distributed 735,000 samples of its "Climalene" cleaner by a method uncommon in merchandising this type of product. In Chicago's *Downtown Shopping News*, they ran a full page advertisement to which was tabbed a cellophane-wrapped sample of "Climalene," the quantity provided being sufficient for household testing. While sampling of this type is quite common in short-run publications, such a campaign on a large scale in the newspaper field is almost unprecedented.

Research Behind Detergents

The value of silicates in combination with tetrasodium pyrophosphate as soap builders is mentioned in the April number of "Silicate P's & Q's" of the Philadelphia Quartz Co. in a discussion of laundering research. A great deal of additional research is going to be required before a complete picture of the detergent action of soap builders alone and in combination is fully understood, it is pointed out. Laboratory findings should be applied in a discriminating manner in actual practice, it is observed, and proof should be required on the practical side before use is made of these findings in actual plant operations. Large scale industrial use of sodium metasilicate, for example, has been based on years of systematic research and practical testing in plant use.

Asplundh Succeeds Galt

Hugh A. Galt has just retired as vice-president of Pittsburgh Plate Glass Co. in charge of the Columbia Chemical division, and as president of Columbia Alkali Corp., New York, after forty years with the company. He is succeeded by Edwin T. Asplundh, as vice-president and general manager of the Columbia Chemical division at Barberton, Ohio. Mr. Asplundh, a graduate of Penn. State in 1912, after serving in the World War as an engineer, came to work for the company in 1919 as assistant superintendent. He left in 1927 to become vice-president and general manager of Pitcairn Autogyro Corp. and a director of Autogyro Corp. of America. In 1934 he returned to Pittsburgh Plate Glass Co. as assistant to the vice-president and became a director in 1937.

P. & G. Declares Dividend

Directors of Procter & Gamble Co. have declared extra and regular common dividends of 50 cents each, both payable May 15 to holders of record April 25.

Exhibit Cleaning Materials at Chicago Hotel Show

SANITARY problems involved in hotel operation were emphasized at the Midwest Hotel Trade Show in Chicago last month with exhibits of soaps, cleaning preparations, water softeners, mechanical cleaning devices and other products displayed by five manufacturers. Demonstration of a new portable cleaning system, the "Rug-o-Vator," attracted large crowds to the booth of Trojan Products & Mfg. Co., Chicago. As explained by John B. Vetter, factory representative in charge, the machine is a non-electric device for renovating carpets, dyeing, waxing and other jobs. It is noiseless and no rinsing is required. Included, also was a display of the "Trojan" line of green soaps, scrubbing compounds, shampoo creme, fabric dry cleaners and spot removers and a new product, "Ani-rene" for removing stains produced on rugs by dogs, cats or other pets.

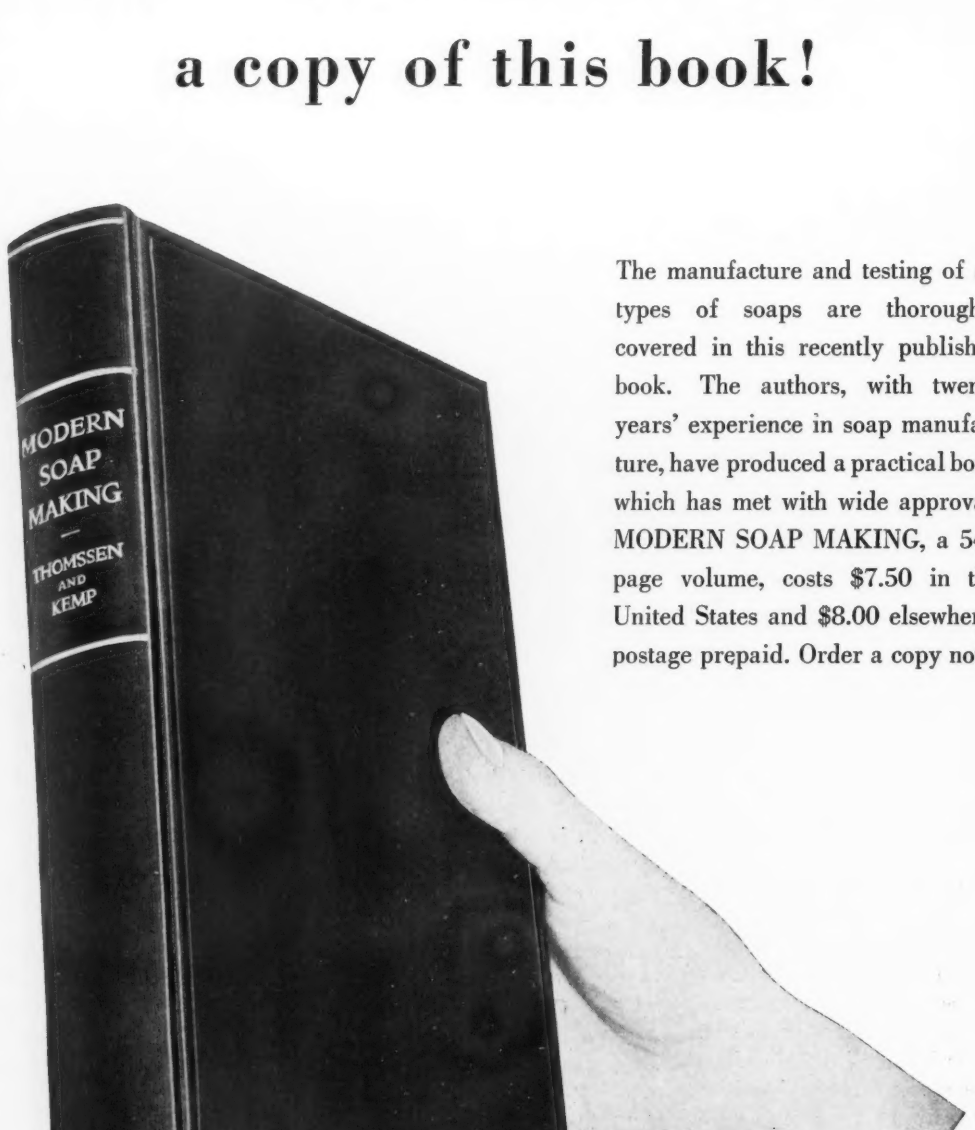
Fred C. Hild, president of Hild Floor Machine Co., Chicago, was in charge of demonstrations of his electrically operated floor scrubbing machines and other maintenance equipment, together with his line of rug, carpet and upholstery shampoo soap preparations. Special attention was given a new "Slip-Safe" vacuum machine for picking up suds after scrubbing. To prove claims that all moisture is removed Mr. Hild invited visitors to try the "match test"—striking matches on the floor immediately after passage of the pickup hose.

System Products Co., Chicago, presented still another device, the "Kleen-Rite" syphon pressure air machine for scrubbing rugs and carpets on the floor. For use with it they exhibited their "Kleen-Rite" cleaner in both powdered and liquid concentrated form. E. A. Pape, general manager, had charge of operations at the booth.

Antiseptol Co., Chicago, had an attractive display of their varied line of chemical cleaning and sanitary products, and their liquid soap dispensers. Included were "Mellofoam" liquid soap, "Poto Polish" rust and stain removing cleanser, "Ma Sheen" dish washing compound, "San Air" deodorizers and other deodorizers in vapor, block and crystal form, "Protex" floor wax, green oil soaps for many purposes, and their new "Dethraze", insecticide. R. C. Peterson, sales manager for Antiseptol's hotel division, was in charge of demonstrations, assisted by R. J. McGrath, while Earl McDowe, president of Antiseptol Co., was in attendance a part of the time.

From Omaha, Neb., the Refinite Corp. sent an educational exhibit to demonstrate action of their "Refinite" zeolite mineral water softener. From the miniature glass model offering a closeup view of the system's actions, one turned to large photographs of actual installations in hotels, hospitals and other institutions. B. M. Beeler, Chicago district sales manager, was kept busy explaining the features of this product.

Every soap manufacturer needs a copy of this book!



The manufacture and testing of all types of soaps are thoroughly covered in this recently published book. The authors, with twenty years' experience in soap manufacture, have produced a practical book which has met with wide approval. MODERN SOAP MAKING, a 540 page volume, costs $7.50 in the United States and $8.00 elsewhere, postage prepaid. Order a copy now.

MAC NAIR-DORLAND CO., *Publishers*

254 WEST 31st STREET NEW YORK CITY

Build New Jergens Plant

Work has been started on construction of a new plant for Andrew Jergens Co., soap and toilet goods manufacturers, in Belleville, N. J. The main building of the factory will face N. Sixth St., near New Mill St. It will house quarters for the manufacture of creams, lotions, perfumes and powders and will be one and two stories high at the sides and four stories in the front center. The entire unit is expected to cost $1,500,000.

William E. Crapp Dies

William E. Crapp, treasurer of Quaker Soap Co., Secaucus, N. J., died April 22 at his home after a long illness. Mr. Crapp was one of the founders of the company which was organized in 1910. He came to the United States from England over forty years ago and prior to his association with Quaker Soap Co., worked with John T. Stanley Co., New York, for a number of years. Mr. Crapp is survived by his widow, Mrs. Helen Heitkamp Crapp, and a brother, Charles J. Crapp of Montclair, N. J., president of Quaker Soap Co.

Boston Bims Plan Program

Bims of Boston, organization of buyers, importers, manufacturers and salesmen of soaps and toilet goods, have announced that their program for the year will include three golf parties in June, July and September. Definite dates will be set in the near future.

W. J. Stoddard Dies

W. J. Stoddard, who originally developed and introduced Stoddard's Solvent, a non-inflammable solvent for dry cleaning use, died in Atlanta, April 23, of heart disease. He was 62 years old.

Form Cartier Chem. Co.

Cartier Chemical Company, Ltd., recently organized with a capitalization of $100,000, has commenced production in its factory at Lachine, Que., where it is manufacturing extensive lines of soaps, soap products, floor wax, oils for floor polishing, cleaning liquids, powders, insecticide, deodorizers, etc. The soaps include bar, chips, powder, toilet and liquid, and a special line of toilet soaps is being manufactured for a large concern. The factory, which has its own railway siding, was recently appraised at a valuation of $65,000. President of the company is Jacques N. Cartier, former Montreal newspaperman and advertising expert, one of the pioneers of radio broadcasting in Canada.

SOAP PLANT COSTS . . .

How can the average soaper cut costs in his plant without reducing quality or efficiency? A study of this problem and some practical answers by J. M. Vallance in an early issue of "Soap & Sanitary Chemicals."

Colgate Sales Equal '39

First quarter domestic sales of Colgate - Palmolive - Peet Co. were about even with those in the 1939 first quarter, but increased advertising expenditures made net income less than that of a year ago, E. H. Little, president, told stockholders at the annual meeting on February 24. Earnings from foreign subsidiaries showed a decrease of $150,000 for the period, he stated. The company started advertising several new products this year and it ordinarily takes six months or so for the effects of increased advertising to be shown in sales, Mr. Little explained.

James S. Adams, executive vice-president, was elected to the board, and the other directors were re-elected. All officers of the company were re-elected by the directors and in addition, H. E. Logan, assistant treasurer and secretary, was elected treasurer to succeed George F. Adamson, retired. Mr. Logan was re-elected assistant secretary. Earl N. Felio, general credit manager, was named assistant treasurer and M. B. Morton, who has been assistant comptroller, was appointed comptroller.

Absorene Mfg. Signs Stipulation

Absorene Mfg. Co. has entered into a stipulation with the Federal Trade Commission to cease representing its product "Abso Crystals" as being capable of whitening clothes perfectly or naturally, as giving longer life to fabrics, as making clothes whiter with less washing or rinsing, as being superior to soap or soap powders, and as being the most powerful water softener ever discovered by chemists and the most effective or economical cleanser for all house cleaning, laundry and bath. The company also agrees to cease representing that "Absorene" sanitizes the atmosphere for healthful cleaning or that it does not crumble.

Hecker Income Declines

Net profit of Hecker Products Corp., New York, for the first quarter of 1940 was about 40 per cent less than earnings for the same period in 1939. After providing for foreign exchange losses, depreciation and Federal income taxes, profits for the quarter ended March 31, 1940 amounted to $243,025, equal to 15c per share. This compares with $407,471, or 24c a share for the quarter ended March 31, 1939.

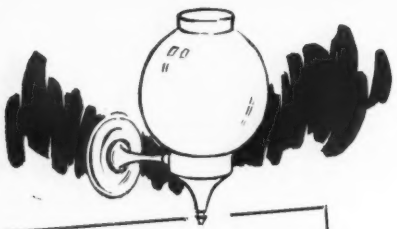
Addresses Packaging Conference

A flagrant example of deceptive soap packaging was cited by W. R. M. Wharton, chief of eastern district, Food & Drug Administration, U. S. Dept. of Agriculture, in a talk before the Packaging Conference at the Hotel Astor, New York, last month. When purchasing soap, said Mr. Wharton, the buyer expects a round or oval shaped cake of soap. Deception was practised in the example cited by cutting an oval cake in half horizontally, producing a cake of soap with one flat side. This half cake was placed in a small box flat side down, nested in shredded paper, so as to assume the appearance of a full cake of soap.

Features Prize Contest

Procter & Gamble Co., Cincinnati, is currently featuring a $31,000 prize contest in the New York market in advertising "Camay" soap.

FOR GOOD, LOW COST PERFUMING OF YOUR LIQUID SOAPS.....



FRAGRANT BLENDS FOR LIQUID SOAPS

BOUQUET No. 191..50c lb.
BOUQUET No. 194..65c lb.
BOUQUET No. 193..70c lb.
BOUQUET No. 192..80c lb.
LEMON No. 6.....50c lb.
LEMON No. 7.....65c lb.
LEMON No. 8.....70c lb.
PINE No. 17.....40c lb.
ROSE No. 37.....80c lb.
ROSE No. 38.....80c lb.
GERANIUM No. 7..70c lb. (Rose-Geranium)
GERANIUM No. 8..$1.15 lb. (Rose-Geranium)

(All lower priced in 5 and 25 lb. lots.)

A CHECK LIST OF DESIRABLE PROPERTIES FOR A GOOD LIQUID SOAP

1. Clarity .....☐
2. Agreeable odor .....☐
3. Neutrality .....☐
4. Rapid lather .....☐
5. Not too great lather volume..☐
6. Good cleansing action.....☐
7. Sufficient viscosity .....☐

If your product checks on all of these points, you'll have a good, salable dispenser soap . . . Use any of the Fritzsche Perfumes above in proper combination with other ingredients and it **will** check on Point No. 1 (Clarity) and Point No. 2 (Agreeable odor).

IT takes no great skill to make **low cost** perfumes for liquid soaps, but to make **GOOD, low cost** perfumes is quite another matter. To produce the latter requires, first of all, exceptional compounding skill, and second, the purchasing power that makes needed materials available at lowest possible cost.

Both of these have contributed substantially to the odor values represented in our new F.B. LIQUID SOAP PERFUMES. They produce extremely pleasant floral and bouquet effects at the low cost of one and a fraction cents per gallon, which, based upon the usual 15% and 20% solutions, brings the gallon cost of your product's fragrance to a mere **fraction of a penny.**

All perfume blends in the accompanying list are highly soluble and will not, therefore, affect the clarity of your product. Test samples for trial and comparison will be furnished upon request. Please address us on your letterhead.

FRITZSCHE BROTHERS, Inc.

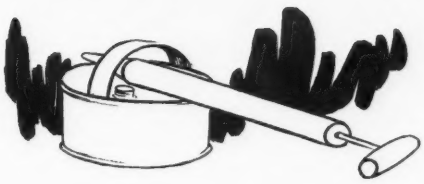
PORT AUTHORITY COMMERCE BLDG., 76 NINTH AVENUE, NEW YORK, N. Y.

BRANCH STOCKS

BOSTON CHICAGO LOS ANGELES ST. LOUIS TORONTO, CANADA MEXICO, D. F.

FACTORIES AT CLIFTON, N. J AND SEILLANS (VAR) FRANCE

INSECTICIDE AIDS



EACH of the following specialties represents the results of intensive laboratory research as applied to some specific problem of deodorization or perfuming:

NEUTROLEUM

Completely and permanently deodorizes all technical mixtures, including insecticides, based upon petroleum distillates. In so doing it permits reduction of from 40 to 70% of the perfume subsequently used for aromatization. Very economical. From 10 to 12 pounds of NEUTROLEUM will permanently deodorize 8000 gallons of petroleum distillate.

DEODORANT P-36

Completely neutralizes the lethane odor effect in products containing Lethane No. 384 Special. Leaves no perceptible odor of its own. Powerful, economical.

SAFRELLA

An excellent and very inexpensive substitute for Artificial Sassafras. Can be used in all insecticide, germicide or technical mixtures.

JAVOLLAL

A powerful and efficient substitute for Citronella Oils of Java or Ceylon. Approximates twice the strength of Citronella and imparts a finer, cleaner and more attractive odor. May be used in insecticides, soaps and all technical mixtures.

METHALATE "C"

Possesses an odor similar to Methyl Salicylate and is equal in concentration, covering property and tenacity. Substitutes for the latter, at considerable saving, in insecticide sprays based upon kerosene distillates. Very useful in other technical products also.

Send for samples or descriptive circulars fully outlining various applications of the above specialties.

FRITZSCHE BROTHERS, Inc.

PORT AUTHORITY COMMERCE BLDG., 76 NINTH AVENUE, NEW YORK, N. Y.

BRANCH STOCKS

BOSTON CHICAGO LOS ANGELES ST. LOUIS TORONTO, CANADA MEXICO, D. F.

FACTORIES AT CLIFTON, N. J. AND SEILLANS (VAR) FRANCE

Plan T.G.A. Convention

The annual convention of the Toilet Goods Association will be held May 14, 15 and 16 at the Hotel Biltmore, New York. The entertainment program of the three-day convention will start with a theatre party Tuesday night, when the gathering will see the popular musical review "Two for the Show." After the theatre a supper dance will be held at the hotel. The golf tournament will be played at the Ridgewood, N. J. Country Club on Wednesday and the annual banquet, with the distribution of souvenirs, always a feature of the meeting, will take place Thursday night. At the business sessions, Herman Brooks, president, will preside, assisted by secretary Charles S. Welch. Reports by Mr. Brooks, counsel Hugo Mock and S. L. Mayham will be followed by a question period. On the third day there will be a meeting of executives for general discussion of industrial problems. There will also be an open symposium on distribution problems at which representatives of chain stores, drug stores, department stores and other outlets will give ten-minute talks. Members of the convention committee are: LeRoy Root, chairman; A. C. Burgund, Charles Fischbeck, Walter E. Klaas, Michael Lemmermeyer, W. P. Murray, Karl Voss and J. B. Walker.

J. B. Williams 100th Year

Now celebrating the one hundredth anniversary of its founding, J. B. Williams Co., Glastonbury, Conn., points to the fact that its "Yankee Soap," originally produced in 1840 by James Baker Williams, is still manufactured by the firm. "Yankee Soap," said to be the first shaving soap made in America, was one of the leading Williams products for fifty years.

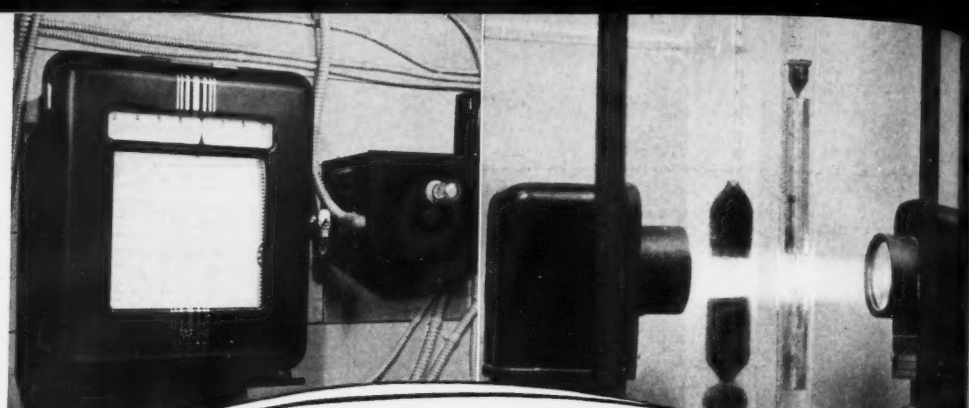
Lottery Methods Banned

The Federal Trade Commission has ordered Mills Sales Co., New York, to discontinue the use of push cards, punch boards or other lottery devices in the sale of cosmetics, shaving and dental creams, drug and household sundries and other articles.

pH RECORDER

First step in the making of TSPP of uniform high quality is the correct proportioning of raw materials. To achieve this objective a continuous, automatic pH recorder (the first of its kind) and an electric eye cut-off are employed. What formerly required many hours of laborious checking is now simply and automatically controlled.

→



VICTOR pHosphates

HEADQUARTERS FOR

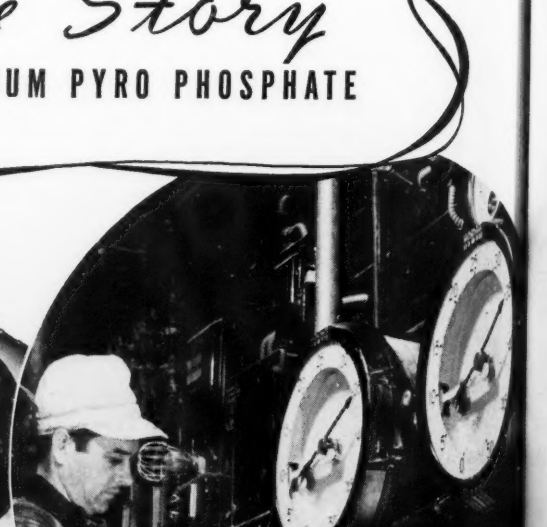
THE *Inside Story*

OF VICTOR TETRA SODIUM PYRO PHOSPHATE

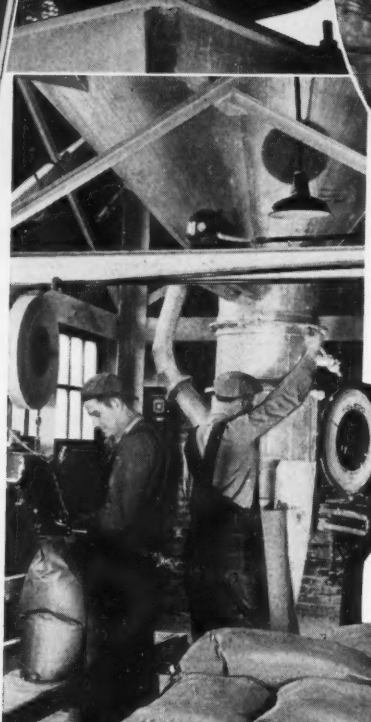
CONVERTER

In this huge converter, heat is applied to tons of orthophosphate . . . changing it into "pyro."

↓



SEND FOR BOOKLET ON TETRA PYRO-PHOSPHATES



CONVERTER CONTROL

↑

Here again accurate control is essential to the production of a product of uniform quality. This picture of the control panel shows that nothing is left to chance in the operation of Victor's "Pyro" Converter.

IN THE BAG

Victor Tetra Sodium Pyrophosphate . . . the superior product of an improved manufacing technique. A soap builder possessing many unique characteristics, Victor TSPP is preferred by leading soap makers.

←

Because of the improved manufacturing technique briefly illustrated here, Victor Tetra Sodium Pyrophosphate is an outstanding product. It excels in purity, physical condition, color and pyrophosphate content. Large scale production assures a dependable, practically unlimited source of supply. Send for experimental sample.

VICTOR CHEMICAL WORKS

141 W. JACKSON BLVD., CHICAGO

Contracts Awarded

Jeffersonville Awards

The following awards were made by the Army Quartermaster in a recent opening in Jeffersonville, Ind.: 15,000 cakes grit soap at 2.95 cents a cake to M. H. Fairchild & Bro., Inc., Chicago; 110,000 lbs. laundry soap at 3.36 cents lb. and 6,000 cakes toilet soap at 7.22 cents a cake to Colgate - Palmolive - Peet Co., Jersey City; and 10,000 lbs. trisodium phosphate at 2.65 cents lb. to Unity Sanitary Supply Co., New York.

Quartermaster Awards

The following awards were granted by the Army Quartermaster in a recent opening at Jeffersonville, Ind.: 3,000 lbs. soap chips at 6 cents to McCann Chemical Co., Louisville, Ky.; 3,000 lbs. trisodium phosphate at 3 cents to Marjo Products Co., Chicago, and 1,152 lbs. scouring powder at 3.75 cents to Imperial Products Co., Philadelphia.

Grit Soap Bid

Eagle Soap Co., Brooklyn, submitted the low bid of 2.9 cents lb. on 5,775 lbs. grit soap in a recent opening by the Post Office Dept., Washington, D. C.

Soda Ash Bid

Turco Products Co., Los Angeles, was low bidder on 60,000 lbs. soda ash at 1.095 cents in a recent opening by the Procurement Div., Treasury Dept., Washington, D. C.

Treasury Supply Bids

In recent openings by the Treasury Procurement Div., Washington, D. C., the following low bids were submitted: 150,000 lbs. laundry soap at 1.85c by Stevens Soap Corp., Brooklyn; 11,340 lbs. toilet soap at 7.57c by Colgate-Palmolive-Peet Co., Jersey City; 6,048 lbs. soap powder at 2.19c by Eavenson & Son, Camden, N. J.; 100,000 lbs. laundry soap at 5.46c by Sterling Supply Corp., Philadelphia; 14,500 lbs. trisodium phosphate at 3.33c by Chemical Mfg. & Distributing Co., Easton, Pa.; 8,060 lbs. scouring powder at 1.51c by Imperial Products Co., Philadelphia; 8,400 lbs. grit soap at 5.577c by Los Angeles Soap Co.; 82,500 lbs. toilet soap at 5.36c by Kirkman & Son, Brooklyn; 7,440 lbs. scouring powder at 1.35c by Armour & Co., Chicago.

Floor Wax Bid

Nielco Chemical Corp., Detroit, was low bidder on 33,000 gals. floor wax at 45c and 16,500 gals. at 44c in a recent opening by Veterans Administration, Procurement Division, Washington, D. C.

Soap Bids

In a recent opening by the Post Office Department, Washington, D. C., the following low bids were submitted: 33,000 lbs. toilet soap at 5.39c by Newell-Gutradt Co., San Francisco; 156,000 lbs. scouring compound at 1.12c by Imperial Products Co., Philadelphia; 200,040 lbs. laundry soap at 3.03c by Kirkman & Son, Brooklyn.

Rust Preventive Award

Dearborn Chemical Co., Chicago, was awarded the contract on 50,000 lbs. rust preventive compound at 5.25 cents in a recent opening by the Army Quartermaster Corps in Chicago.

Furniture Polish Bid

Waxaid Co., Baltimore, was low bidder at 11.82 cents on 1,200 cans furniture polish in a recent opening by the Treasury Procurement Supply at Washington, D. C.

Laundry Soap Bid

John T. Stanley Co., New York, submitted the low bid of 9.25 cents on 1,008 lbs. laundry soap in a recent opening by the Treasury Dept. Procurement Div., Washington, D. C.

Green Soap Bid

Harley Soap Co., Philadelphia, submitted the low bids of $1,170 on 12,000 lbs. green soap, and $1,014 on 12,400 lbs. green soap in a recent opening by the Veterans Administration Supply Div., Washington, D. C.

Floor Wax Bid

Waxaid Co., Baltimore, bid low on 300 gals. floor wax at 44.9 cents in a recent opening by the Post Office Dept., Washington, D. C.

Plan Chicago Chemical Show

Chemical products will be featured in the first American Chemical Exposition, to be held December 11 to 15, 1940, at the Stevens Hotel, Chicago. R. C. Newton of Swift & Co. is chairman of the committee in charge. Plans for the exposition, which is to be the first of a series of expositions to be held in even numbered years to alternate with the Exposition of Chemical Industries, have been perfected by a committee of ten, among whom are V. Conquest, Armour & Co. and R. E. Zinn, Victor Chemical Works, Chicago. Approximately 32,000 square feet will be available for some 300 exhibitors of the chemical industry, Dr. Newton said. This show will differ from the Exposition of Chemical Industries held bi-annually in New York in that the emphasis will be placed on chemical products rather than on industrial processes. Funds for promoting the exposition have been supplied by the Chicago section of the American Chemical Society.

Pirkle to Represent Quaker

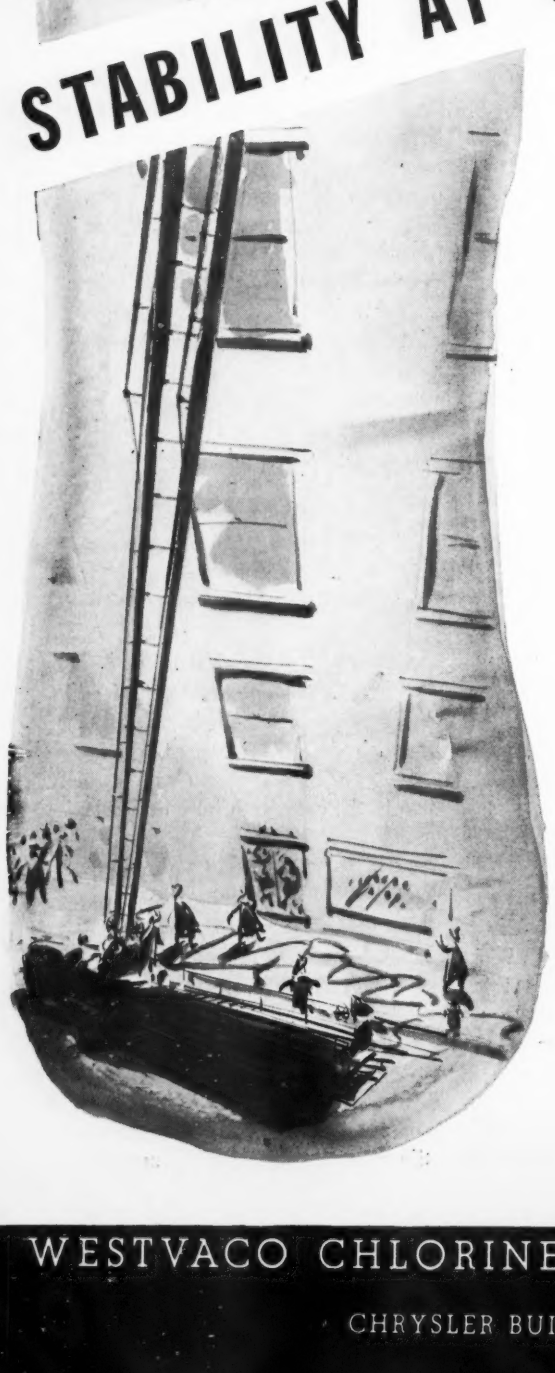
J. C. Pirkle has recently joined Quaker Chemical Products Corp., Conshohocken, Pa., as representative to the textile industry in North Carolina in the capacity of technical sales and service. Mr. Pirkle was formerly general superintendent of Faytex Mills, Fayettesville, N. C.

Heads New Department

Felix A. Tomalino has been made head of the newly-formed MERT department of Carolina Aniline & Extract Co., Charlotte, N. C. The new department will carry the company's activities beyond the textile field into unrelated industries.

STABILITY AT HIGH TEMPERATURES

WARNER TSPP



Outstanding in its action as a clarifying agent, TSPP clears a boiling soap or sulfonated oil solution of turbidity caused by hard water. More important, TSPP keeps these near-the-boiling-point solutions clear for many hours.

High in detergent, deflocculating and emulsifying powers, TSPP has low alkalinity. Bland, yet active, TSPP is safe for the daintiest of fabrics in home laundering, yet its fast lather-building brings new efficiency to commercial laundering.

Not only is the range of uses of TSPP in the detergent field a broad one, but the improvements it brings to products and processes are generally accompanied by substantial savings in operating costs.

Investigation may disclose interesting advantages in the application of WARNER TSPP to your products or processing. We will welcome the opportunity to cooperate with adequate samples, price quotations and technical consultation. Your inquiry will have immediate attention. There is, of course, no obligation.

OTHER WARNER CHEMICALS

Bromine	**Acid Sodium Pyrophosphate**	**Epsom Salt**
Blanc Fixe	**Chemical Grade Magnesia**	**Caustic Soda**
Carbon Bisulfide	**Alumina Hydrate, Light**	**Chlorine, Liquid**
Trichlorethylene	**Liquid Caustic Potash**	**Phosphoric Acid**
Sulphur Chloride	**Carbon Tetrachloride**	**Barium Carbonate**
Sodium Phosphates	**Sodium Sulfide**	**Hydrogen Peroxide**

WARNER

CHEMICAL COMPANY • DIVISION OF

WESTVACO CHLORINE PRODUCTS CORPORATION

CHRYSLER BUILDING, NEW YORK, N. Y.

New Trade Marks

The following trade-marks were published in the April issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

Trade Marks Filed

DOGIE BRAND — This in solid letters over drawing of calf's head describing insect repellent. Filed by San Marcos Chemical Co., San Marcos, Texas, Feb. 7, 1940 Claims use since March 1, 1936.

DAREX—This in solid letters describing insecticides. Filed by Dewey and Almy Chemical Co., Cambridge, Mass., Feb. 16, 1940. Claims use since May 8, 1939.

KOLOFOG—This in solid letters describing insecticidal composition for use on plants. Filed by Niagara Sprayer and Chemical Co., Middleport, N. Y., Feb. 26, 1940. Claims use since March 6, 1931.

THANITE—This in solid letters describing insecticidal raw material. Filed by Hercules Powder Co., Wilmington, Del., Feb. 27, 1940. Claims use since Jan. 29, 1940.

M C S—This in stenciled letters describing insecticides. Filed by Sinclair Refining Co., New York, Jan. 24, 1940. Claims use since Dec. 22, 1939.

M H—This in stenciled letters describing insecticides. Filed by Sinclair Refining Co., New York, Jan. 24, 1940. Claims use since Dec. 22, 1939.

ODOR-X—This in outline letters describing deodorant. Filed by Ralph L. Dombrower Co., Inc., Richmond, Va., Dec. 11, 1939. Claims use since Nov. 2, 1939.

K M—This in outline letters describing washing powder. Filed by National Home Products, Inc., New York, Jan. 13, 1940. Claims use since Jan. 10, 1939.

NICE GOIN'—This in script letters describing liquid surface cleaner. Filed by Brenner's, Inc., Belleville, Ind., Feb. 8, 1940. Claims use since Jan. 30, 1940.

LATHERALL—This in solid letters describing shaving cream. Filed by Trade Laboratories, Inc., Newark, N. J., Nov. 18, 1939. Claims use since May, 1922.

OEILLET BLEU—This in solid letters describing soaps. Filed by Roger & Gallet, New York, N. Y., Jan. 23, 1940. Claims use since Aug. 15, 1925.

HANDEEZ—This in solid letters above drawing of man washing hands, describing soap. Filed by C. B. Dolge Co., Westport, Conn., Feb. 14, 1940. Claims use since Jan. 15, 1940.

WEST — This in reverse on black oval describing insecticides. Filed by West Disinfecting Co., Long Island City, N. Y., Jan. 26, 1940. Claims use since April 19, 1932.

VAPODOR—This in solid letters describing deodorants. Filed by Selig Co., Atlanta, Ga., Feb. 28, 1940. Claims use since Dec. 26, 1939.

JELIDENT—This in solid letters describing dentifrice. Filed by American Druggists Syndicate, Inc., Long Island City, N. Y. March 1, 1940. Claims use since Jan. 31, 1940.

SOZO—This in solid letters inside an outline diamond describing ing insecticide. Filed by Harry D. Nicholaou, Baltimore, March 1, 1940. Claims use since Nov. 6, 1939.

SKALOL—This in solid letters describing parasiticides. Filed by California Spray-Chemical Corp., Richmond, Cal., March 4, 1940. Claims use since 1927.

WINTROL—This in solid letters describing parasiticides. Filed by California Spray-Chemical Corp., Richmond, Cal., March 4, 1940. Claims use since 1921.

SPRAYSOY — This in stenciled letters describing adhesive agent and emulsification agent for parasiticides. Filed by Glidden Co., Cleveland, Dec. 22, 1938. Claims use since Jan. 31, 1938.

MOBIL—This in solid letters describing cleaning composition. Filed by Socony-Vacuum Co., Inc., New York, Jan. 5, 1940. Claims use since May 1, 1934.

SURFASOL—This in solid letters describing jelly soap, sweeping compound, liquid toilet and laundry soap. Filed by Habow Chemicals, Inc., Conover, N. C., Oct. 23, 1939. Claims use since May 1, 1939.

CHLOROSOPE — This in solid letters describing soap powder. Filed by Hardin Chemical Co., New York, Dec. 15, 1939. Claims use since Sept. 8, 1939.

SEAFORTH—This in letters resembling script describing soap. Filed by Alfred D. McKelvy, Minneapolis, Feb. 5, 1940. Claims use since Aug. 15, 1939.

BING—This in outline letters describing insect spray. Filed by Interstate Drug Corp., Chicago, Oct. 30, 1939. Claims use since June 1, 1931.

DAVAX—This in solid letters describing prepared liquid wax. Filed by Davies-Young Soap Co., Dayton, Ohio, Feb. 1, 1940. Claims use since Jan. 20, 1940.

L T L—This in outline letters describing paint cleaner. Filed by Louis T. Larson, Stanton, Iowa, Feb. 8, 1940. Claims use since Jan. 13, 1940.

CEPRYN—This in solid letters describing antiseptic. Filed by Wm. S. Merrell Co., Cincinnati, Feb. 5, 1940. Claims use since Dec. 11, 1939.

HITOX—This in solid letters describing insecticide. Filed by Dom F. Evia, New York, March 9, 1940. Claims use since June, 1934.

STORM KING — This in script letters over drawing of mountain describing auto cleanser. Filed by Alfred Zinker, New York, Feb. 5, 1940. Claims use since April, 1931.

NU-A-GAN—This in solid letters describing furniture polish. Filed by Soil-Off Mfg. Co., Glendale, Cal., Nov. 21, 1939. Claims use since May 15, 1939.

Trade Marks Granted

376,420. Synthetic Cleaning Agent. Turco Products, Inc., Los An-

Clear and Sparkling as a **WATERFALL** *in Spring*

ISCO LIQUID CAUSTIC POTASH

45% KOH.

Iron free. Dependable quality maintained by constant laboratory control and vigilant care at each step of production.

ISCO CAUSTIC POTASH

Also comes in

Solid - Flake - Granular - Broken and Walnut Forms

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ISCO CAUSTIC SODA

ISCO CARBONATE OF POTASH

Produced in our Niagara Falls Factory.

•

ISCO WAXES **BEESWAX**

CARNAUBA and CANDELILLA

Pure Yellow Refined • Pure White Sunbleached

FLAKE and LUMP FORMS

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DO HOUSEWIVES ORDER YOUR PRODUCT MORE THAN ONCE?

A quality product always gets repeat orders. But there's an added incentive when it has the unfailing protection and convenience of KORK-N-SEAL, the cap with the handy lever. . . KORK-N-SEAL seals tight! It protects your product effectively, efficiently, whether in glass or tin. At the same time, KORK-N-SEAL is easy for the user to open; and convenient to re-seal after opening . . . These outstanding features add to the salability of your product. Why not get the complete story of KORK-N-SEAL—and its new low price—today?

TO OPEN you simply raise the handy lever and the cap lifts right off.

TO RE-SEAL replace the cap and press the handy lever down.

WILLIAMS SEALING CORPORATION

Division of Crown Cork & Seal Co.

DECATUR, ILLINOIS

KORK-N-SEAL

THE CAP WITH THE HANDY LEVER

Staley Salad Cooking Oil, manufactured by the A. E. Staley Manufacturing Company, is given the sure protection of KORK-N-SEAL, the cap that combines sealing efficiency with convenience for consumers.

geles. Filed Dec. 16, 1938. Serial No. 413,920. Published Jan. 16, 1940. Class 4.

376,482. Detergent Materials. International Chemical Co., Chicago. Filed Oct. 20, 1939. Serial No. 424,727. Published Jan. 16, 1940. Class 4.

376,490. Cleaning Compounds. Standard Supply Co., New Haven, Conn. Filed Oct. 27, 1939. Serial No. 424,977. Published Jan. 9, 1940. Class 4.

376,515. Liquid Gloss. Standard Oil Co. of N. J., Wilmington. Filed Nov. 8, 1939. Serial No. 425,433. Published Jan. 16, 1940. Class 16.

376,657. Soapless Cleaner. R. R. Street & Co., Chicago. Filed Nov. 27, 1939. Serial No. 426,011. Published Jan. 23, 1940. Class 4.

376,665. Washing Compound. Armour & Co., Chicago. Filed Nov. 30, 1939. Serial No. 426,116. Published Jan. 23, 1940. Class 4.

376,717. Weed Killer. Dutch Ellis, Monticello, Ill. Filed Aug. 19, 1939. Serial No. 422,776. Published Jan. 9, 1940. Class 6.

376,773. Fly Spray. Claire Manufacturing Co., Chicago. Filed Feb. 28, 1938. Serial No. 403,495. Published Jan. 23, 1940. Class 6.

376,776. Insecticides. Deborah C. Miner, Portland, Ore. Filed May 13, 1938. Serial No. 406,298. Published June 6, 1939. Class 6.

376,777. Dentifrice. Katie Nelson, Monongahela, Pa. Filed July 25, 1938. Serial No. 408,893. Published Oct. 11, 1938. Class 6.

376,791. Insecticides. Whitmire Research Corp., St. Louis. Filed March 15, 1939. Serial No. 417,109. Published May 9, 1939. Class 6.

376,792. Water Softener. United Toilet Goods Corp., New York. New York. Filed April 10, 1939. Serial No. 418,078. Published aJn. 9, 1940. Class 6.

376,805. Disinfectants. McCormick & Co., Baltimore. Filed Aug. 1, 1939. Serial No. 422,177. Published Oct. 17, 1939. Class 6.

376,835. Disinfectant, deodorant, insecticide. Chemical Concentration Co., Memphis. Filed Sept. 28, 1939. Serial No. 423,997. Published Jan. 9, 1940. Class 6.

376,844. Dentifrices. Roy C. Chambers, Los Angeles. Filed Oct. 10, 1939. Serial No. 424,385. Published Jan. 30, 1940. Class 6.

376,856. Liquid dentifrices. Gordon M. MacNeil, Lynbrook, N. Y. Filed Oct. 27, 1939. Serial No. 424,965. Published Jan. 9, 1940. Class 6.

376,871. Cleaning compound. Turco Products, Inc., Los Angeles. Filed Nov. 6, 1939. Serial No. 425,313. Published Jan. 30, 1940. Class 4.

376,872. Detergent. Richard D. Schwaber, Chicago. Filed Nov. 1, 1939. Serial No. 425,318. Published Jan. 30, 1940. Class 4.

376,886. Liquid gloss. Standard Oil Co. of N. J., Wilmington. Filed Nov. 8, 1939. Serial No. 425,434. Published Jan. 23, 1940. Class 16.

376,925. Roach preparation. Stewart-Jorgensen Co., Sturgis, S. D. Filed Nov. 17, 1939. Serial No. 425,760. Published Jan. 23, 1940. Class 6.

376,938. Soap powder. Hardin Chemical Co., New York. Filed Nov. 24, 1939. Serial No. 425,918. Published Jan. 30, 1940. Class 4.

376,949. Dentifrices. Berg-Williams Corp., Dover, Del. Filed Dec. 2, 1939. Serial No. 426,149. Published Jan. 30, 1940. Class 6.

376,950. Cleansing compound. Solvay Process Co., New York. Filed Dec. 1, 1939. Serial No. 426,143. Published Jan. 30, 1940. Class 4.

376,958. Soapless cleaner. Mo-Zel Chemical Products Co., St. Louis. Filed Dec. 4, 1939. Serial No. 426,215. Published Jan. 30, 1940. Class 4.

377,030. Metal polish. Alfred Emiley, New Lenox, Ill. Filed July 27, 1939. Serial No. 422,004. Published Feb. 6, 1940. Class 4.

377,069. Window cleanser. Leon Perloff, Philadelphia. Filed Oct. 30, 1939. Serial No. 425,129. Published Feb. 6, 1940. Class 4.

377,117. Soap. Fitzpatrick Bros., Chicago. Filed Dec. 9, 1939. Serial No. 426,406. Published Feb. 6, 1940. Class 4.

Discuss Soap Phases

In a symposium on Phase Transitions at the 99th meeting of the American Chemical Society in Cincinnati on April 11, Professor James W. McBain, Michael Macomber and Marjorie J. Vold, of Stanford University, discussed "Stable Phases Occurring Between True Crystal and True Liquid for Single Pure Anhydrous Soaps." An abstract follows:

Most of the common chemicals melt; that is, change from solid to liquid, at a single temperature. However, there are a considerable number of substances which refuse to perform in this way, the solid changing into a liquid in a series of steps. The intermediate forms are called "mesomorphic."

The substances of which ordinary household soap is largely made up (sodium salts of fatty acids of high molecular weight) are of this kind. That there is at least one mesomorphic form has been known for thirty years, but the values reported by different investigators, or even the same investigator on different occasions, for the temperatures at which "it" formed or disappeared sometimes differed from each other by 100 degrees or more. The reason for these big differences now is found to be that there are really at least five different intermediate forms, instead of only one.

Stein-Hall Honors Hall

The officers and directors of Stein, Hall & Co., New York, importers of palm oil, recently tendered a banquet to Frank Griswold Hall, president, in celebration of the fiftieth anniversary of his association with the company. Starting as an office boy, Mr. Hall subsequently became stock clerk, salesman and partner, and finally president of the company in 1918.

Starts New Company

William Ginsburg, Brooklyn, has just organized a new company, Certified Soap Products, Inc., at 72 Berry St. Not yet engaged in active production, the company will manufacture laundry soaps.

CUT MIXING COSTS OF:

Agricultural Insecticides
Anti-Freeze Products
Antiseptics
Cleaning Fluids
Deodorizing Products
Disinfectants
Floor Products
Germicides
Glycerin
Household Ammonia
Laundry Bleach
Liquid Scrub Soap
Liquid Soap
Moth Products
Oil Soap
Polishes
Stock Sprays and Dips
Theatre Sprays

WHAT MIXING ACTION DO YOU NEED?

In addition to the extremely efficient patented "LIGHTNIN" Double Mixing Action — which produces rapid rotation plus bottom-to-top turnover, a wide variety of mixing actions are possible. A turn of the new "LIGHTNIN" Hand Clamp and you can position your "LIGHTNIN" mixer to any action you desire. Vortexing for drawing in light powders—a long rolling swirl and other mixing action best suited for your operation are possible.

LOWEST COST MIXING

With A "LIGHTNIN" Mixer Every Tank, Kettle, Crock, Vat, Barrel, or other Container In Your Plant Becomes A Potential Mixing Unit.

Portable, easily moved from one container to another and readily adjustable to any desired angle. All "LIGHTNIN" Mixers (except Variable Speed Models) may be obtained with any type motor to fit any current characteristics. Choice of Stainless Steel or Monel Shafts and Propellers. Adjustable length shafts—by means of tube and chuck—just like a carpenter's drill. "LIGHTNIN" is the most complete line of propeller type mixers made. Send for complete literature, stating product to be mixed.

Write choice of types, sizes, and motors.

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Raw Material Markets

As of April 25, 1940

NEW YORK — Several sharp price advances, related in many instances to developments in the European war, featured the market for soap and sanitary chemical raw materials this period. Carnauba wax moved to sharply higher levels as shortage of stocks in this market and difficulty of securing replacements sent buyers on a search for spot stocks. Bergamot oil continued its drastic advance against a background which indicated that perhaps the Italian government was hoarding stocks of citrous fruits in anticipation of a North African campaign. Soap fats exhibited a mixed trend, with coconut oil, tallow and olive oils being quoted fractionally higher, while stearic acid, red oil and other items in the fatty acid group moved to lower levels.

Animal Fats

The trend of animal fat prices was upward this period. Users of tallow were active through the month in seeking additional supplies, but sellers, for the most part, were not inclined to offer freely. Quotations on the Produce Exchange futures market advanced during the period from 4¾c to a current level of 5c per pound. Quotations on yellow grease were also fractionally higher.

Olive Oil

Embargoes by all olive oil producing countries except Greece make this a market dominated by fear of curtailment of shipment offerings. Prices of denatured olive oil were advanced as much as 2 cents by some sellers this period. Fairly active market.

Coconut Oil

With coconut oil in tank car lots at 3¼ cents per pound as a generally recognized figure, sellers are holding off on account of rumors of higher freight rates in the near future. Futures on the Pacific Coast are quoted at 2⅞ for early summer.

Palm Oil

British controlled prices hold this market fairly steady. Quotations are largely nominal at a level of 2¼c cif New York.

PERFUME MATERIALS

Bois de Rose Oil

Bois de rose quotations dropped 5 cents to a basis of $1.60 to $1.65. Most sellers are able to offer only the Brazilian item.

Oil of Cassia

Competition on cassia resulted in a price drop of 5 cents per pound this period. Prices are steady at $1.25 to $1.30 per pound, demand is moderate and spot reserves are said to be ample for present needs.

Cedar Leaf Oil

Quotations were shaded 10 cents a pound this period. Buyers' needs are conservative and market is settled. Recovery from the recent water shortage in producing areas has eased fears that this year's production might be somewhat curtailed.

Bergamot Oil

The advance in bergamot oil quotations expanded sharply late this period lifting the price another dollar to a current range of $6 to $6.50 per pound. This advance, following a 75c rise last month, has brought the price up almost 50 per cent in the past two months. Shipment offerings from Italy have been very light even at the high level of current prices. This recalls the large price advance which came just before and during the Ethiopian campaign and gives rise to the speculation that the Italian government might again be hoarding bergamot supplies with a similar motive. A sympathetic advance has also been noted in the price of artificial bergamot.

SILICATE IN SOAPS . . .

How and when to use silicate in soaps . . . and how much . . . and when not to use it . . . a practical discussion based on many years of observation at the soap kettle by C. R. Kemp in the next issue.

Cananga Oil

Prices on both native and rectified grades of cananga oil went up this period 15 cents and more according to the seller. Replacement costs are high.

Cajeput Oil

Cajeput oil was advanced 14 cents this period to be quoted currently at 75 to 76 cents.

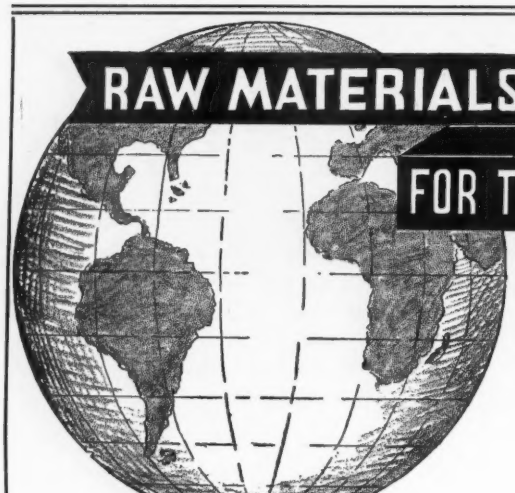
MISCELLANEOUS

Carnauba Wax

Quotations on all grades of carnauba advanced 4 to 12 cents per pound this period. It was reported that the current crop is nearly exhausted and the next crop is not to be expected until sometime in December. Another contributing factor in the price advance was the French seizure of two Norwegian ships bound for the United States from Brazil with large cargoes of carnauba wax. The ships were taken into Martinique in "protective custody." The wax was long overdue on this market, virtually all sold and badly needed here. However the ships have been released and allowed to continue North. Current wax prices after the sharp advance are practically nominal.

Insect Powder

Pyrethrum prices eased off moderately this period in the continuation of a declining trend that may be characteristic of this market for some time to come. Following the abnormally high levels of the past year, it is inevitable that pyrethrum prices should seek lower levels with the reestablishment of a more normal supply situation.



RAW MATERIALS 1838-1940

FOR THE SOAP INDUSTRY

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Chemicals
Fatty Acids
White Mineral Oils
Petrolatums

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Mineral Oils — Petrolatums

Fatty Alcohols — Special Fatty Acids

Castor Oil	Olive Oil Foots	Fatty Acids	Grease	Modified Soda
Cocoanut Oil	Peanut Oil	Lard Oils	Lanolin	Silicate Soda
Corn Oil	Perilla Oil	Neatsfoot Oil	Caustic Soda	Metasilicate
Cottonseed Oil	Rapeseed Oil	Oleo Stearine	Soda Ash	Tri Sodium Phosphate
Palm Oil	Sesame Oil	Stearic Acid	Caustic Potash	Di Sodium Phosphate
Palm Kernel Oil	Soya Bean Oil	White Olein	Carbonate Potash	Chlorphyll
Olive Oil	Teaseed Oil	Tallow	Sal Soda	Superfatting Agent

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Raw Material Prices

(As of April 25, 1940)

Minimum Prices are for car lots and large quantities. Price range represents variation in quotations from different suppliers and for varying quantities

Chemicals

Acetone, C. P., drums	lb.	$ .07½	$ .08
Acid, Boric, bbls., 99½%	ton	106.00	138.00
Cresylic, drums	gal.	.68	.70
Low boiling grade	gal.	.68	.70
Muriatic, C. P., carboys	lb.	.08	—
Oxalic, bbls.	lb.	.10¾	.12
Adeps Lanae, hydrous, drums	lb.	.29	.30
Anhydrous, drums	lb.	.30	.31
Alcohol, Ethyl, U.S.P., bbls.	gal.	4.55	4.61½
Complete Denat., SD 1, drums, ex.	gal.	.28½	.34½
Alum. Potash lump, bbls.	lb.	.04	—
Ammonia Water, 26°, drums	lb.	.02¼	.02½
Ammonium Carbonate, tech., bbls.	lb.	.08	—
Bentonite, 1, works, 350 mesh	ton	—	16.00
Bentonite, 2, works, 200 mesh	ton	—	11.00
Bleaching Powder, drums	100 lb.	2.00	3.35
Borax, pd., cryst., bbls., kegs	ton	58.00	74.00
Carbon Tetrachloride, car lots	gal.	.66½	1.10
L. C. L.	gal.	.73	1.20
Caustic, see Soda Caustic, Potash Caustic			
China Clay, filler	ton	10.00	26.00
Cresol, U.S.U., drums	lb.	.09¾	.10¼
Creosote Oil	gal.	.13½	.14½
Feldspar, works (200 to 325 mesh)	ton	32.00	35.00
Formaldehyde, bbls.	lb.	.05¾	.06
Fullers Earth	ton	15.00	—
Glycerine, C.P., drums	lb.	.12½	.13
Dynamite, drums	lb.	—	Nom.
Saponification, drums	lb.	.08¾	.09
Soap, lye, drums	lb.	.07¾	.08¼
Hexalin, drums	lb.	.80	—
Lanolin, see Adeps Lanae.			
Lime, live, bbls.	per bbl.	—	2.45
Mercury Bichloride, kegs	lb.	2.04	2.19
Napthalene, ref. flakes, bbls.	lb.	.06¾	.07
Nitrobenzene (Mirbane) drums	lb.	.08	.09
Paradichlorbenzene, drums	lb.	.12½	.15½
Petrolatum, bbls. (as to color)	lb.	.04	.07½
Phenol (Carbolic Acid), drums	lb.	.13	.14¾
Pine Oils, bbls.	gal.	.53	.59
Potash, Caustic, solid	lb.	.06¼	.06¾
Flake, 88-92%	lb.	.07	.07½
Liquid, 45% basis	lb.	.03½	.03¾
Potassium Carbonate, solid	lb.	.06½	.06¾
Liquid	lb.	.02¾	.03⅛
Pumice Stone, powder	100 lb.	3.50	4.50
Rosins (600 lb. bbls. gross for net)—			
Grade D to H, basis 280 lbs.	bbl.	5.25	6.05
Grade I to N	bbl.	6.15	6.70
Grade WG to X	bbl.	6.95	7.35
Wood	bbl.	4.65	6.40
Rotten Stone, pwd., bbls.	lb.	.08½	.10
Silica	ton	20.00	27.00
Soap, Mottled	lb.	.04⅛	.04½
Olive Castile, bars	lb.	.17	—
Olive Castile, powder	lb.	.26	.30
Powdered White, Neutral	lb.	.19	.22
Olive Oil Foot, bars, 68-70%	lb.	.11	—
Green, U.S.P.	lb.	.09	—
Tallow Chips, 88%	lb.	.08¼	—
Soda Ash, cont., wks., bags, bbls.	100 lb.	1.10	1.35
Carlots, in bulk	100 lb.	.90	.95
Soda Caustic, cont., wks., solid	100 lb.	2.30	—
Flake	100 lb.	2.70	2.95
Liquid, tanks, 47-49%	100 lb.	1.95	—
Soda Sal., bbls.	100 lb.	1.10	1.30
Sodium Chloride (Salt)	ton	15.00	15.60
Sodium Fluoride, bbls.	lb.	.07	.08¼
Sodium Hydrosulfite, bbls.	lb.	.16	.17
Sodium Metasilicate, ground	100 lb.	3.75	4.80
Crystalline	100 lb.	2.35	3.35
Sodium Pyrophosphate	100 lb.	5.10	5.30
Sodium Silicate, 40 deg., drum	100 lb.	.80	1.20
Drums, 52 deg. wks.	100 lb.	1.40	1.80
Tar Acid Oils, 15-25%	gal.	.22	.28
Triethanolamine	lb.	.19	.20
Trisodium Phosphate, bags, bbls.	lb.	.0225	.0245
Zinc Oxide, lead free	lb.	.06½	.07¾

Oils — Fats — Greases

Babassu, tanks, futures	lb.	.06⅛	.06¼
Castor, No. 1, bbls.	lb.	.13¼	.14
No. 3, bbls	lb.	.12¾	.13½
Coconut (without excise tax)			
Manila, tanks, N. Y.	lb.	.03¼	—
Tanks, Pacific Coast, futures	lb.	.02⅞	.03
Copra, bulk, coast	lb.	.0175	.0185
Corn, tanks, mills	lb.	.06¼	.06⅜
Cottonseed, crude, tanks, mill	lb.	.06¼	—
PSY, futures	lb.	.07	.07¼
Fatty Acids—			
Corn Oil, tanks	lb.	.08½	.08¾
Coconut Oil, tanks, Twitchell	lb.	.09	.10
Cotton Oil, tanks	lb.	.05¾	.06
Settled soap stock, Chicago	lb.	.03	.03¼
Boiled soap stock, 65%, Chi.	lb.	.04	.04¼
Foots, 50%, Chicago	lb.	.01¾	.01⅞
Red Oil, bbls., dist. or sapon.	lb.	.07½	—
Tanks	lb.	.07	—
Stearic Acid,			
Double pressed	lb.	.10½	—
Triple pressed	lb.	.13¼	—
Greases, choice white, tanks, Chi.	lb.	.05	.05⅛
Yellow	lb.	.04⅝	.04⅞
Lard, city	lb.	.06¼	.06½
Linseed, raw, bbls.	lb.	.1080	.1100
Tanks, raw	lb.	.1020	.1040
Olive, denatured, bbls., N. Y.	gal.	.97	.98
Foots, bbls., N. Y.	lb.	.08¼	.08⅜
Palm, Sumatra, cif. New York	lb.	.02¼	.02⅜
Palm, kernel, shipment	lb.	No Prices	
Soya Bean, domestic, tanks, crude	lb.	.05½	Nom.
Stearine, oleo, bbls.	lb.	.06	.06¼
Tallow, special, f.o.b. plant	lb.	.04⅞	—
City, ex. loose, f.o.b. plant	lb.	.05	—
Teaseed Oil, crude	lb.	.12½	Nom.
Whale, refined	lb.	.0910	—

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ROSANTHOL I .....$1.75 lb.

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(As of April 25, 1940)

Essential Oils

Almond, Bitter, U.S.P.	lb.	$2.00	$2.10
Bitter, F.F.P.A.	lb.	2.10	2.20
Sweet, cans	lb.	.75	.80
Anise, cans, U.S.P.	lb.	.68	.70
Bay, cans	lb.	1.20	1.25
Bergamot, coppers	lb.	6.00	6.50
Artificial	lb.	1.50	1.75
Birch Tar, rect., cans	lb.	.75	.80
Crude, cans	lb.	.25	.26
Bois de Rose, Brazilian	lb.	1.60	1.65
Cayenne	lb.	1.70	1.80
Cade, cans	lb.	.55	.65
Cajeput, native, cans	lb.	.75	.76
Calamus, cans	lb.	8.25	8.50
Camphor, Sassy, drums	lb.	.36	.37
White, drums	lb.	.50	Nom.
Cananga, native, cans	lb.	1.75	1.80
Rectified, cans	lb.	2.00	2.35
Caraway Seed	lb.	2.50	3.00
Cassia, Redistilled, U.S.P.	lb.	1.25	1.30
Cedar Leaf, cans	lb.	.80	.85
Cedar Wood, light, drums	lb.	.22	.24
Citronella, Java, drums	lb.	.39	.40
Citronella, Ceylon, drums	lb.	.40	.41
Clove, U.S.P., cans	lb.	1.25	1.30
Eucalyptus, Austl., U.S.P., cans	lb.	.69	.72
Fennel, U.S.P., cans	lb.	2.25	3.00
Geranium, African, cans	lb.	2.75	3.10
Bourbon, cans	lb.	2.75	3.10
Turkish	lb.	2.25	2.50
Hemlock, tins	lb.	.80	.85
Lavender, U.S.P., cans	lb.	2.50	2.80
Spike, Spanish, cans	lb.	1.20	1.85
Lemon, Ital., U.S.P.	lb.	3.85	4.50
Cal.	lb.	2.85	—
Lemongrass, native, cans	lb.	.85	.90
Linaloe, Mex., cases	lb.	1.35	1.40
Nutmeg, U.S.P., cans	lb.	1.80	1.85
Orange, Sweet, W. Ind., cans	lb.	2.00	2.10
Italian cop	lb.	3.80	5.00
Distilled	lb.	.90	—
California, expressed	lb.	1.25	1.60
Origanum, cans, tech	lb.	1.10	1.80
Patchouli	lb.	6.00	6.75
Pennyroyal, dom.	lb.	3.00	Nom.
Imported	lb.	2.75	2.80
Peppermint, nat., cans	lb.	2.70	2.95
Redis., U.S.P., cans	lb.	2.95	3.20
Petitgrain, S. A., cans	lb.	1.55	1.60
Pine Needle, Siberian	lb.	1.30	1.35
Rosemary, Spanish, cans	lb.	.75	.80
drums	lb.	.70	.75
Sandalwood, E. Ind., U.S.P.	lb.	5.25	5.50
Sassafras, U.S.P.	lb.	1.20	1.25
Artificial, drums	lb.	.70	.71
Spearmint, U.S.P.	lb.	2.20	2.30
Thyme, red, U.S.P.	lb.	.80	1.75
White, U.S.P.	lb.	.95	1.95
Vetivert, Bourbon	lb.	8.50	15.00
Ylang Ylang, Bourbon	lb.	4.25	6.50

Aromatic Chemicals

Acetophenone, C. P.	lb.	$1.60	—
Amyl Cinnamic Aldehyde	lb.	1.70	$2.00
Anethol	lb.	1.10	1.15
Benzaldehyde, tech.	lb.	.55	.60
U.S.P.	lb.	.85	.95
Benzyl, Acetate	lb.	.44	.49
Alcohol	lb.	.63	.68
Citral	lb.	1.55	3.10
Citronellal	lb.	.75	.80
Citronellol	lb.	1.60	1.85
Citronellyl Acetate	lb.	4.00	7.00
Coumarin	lb.	2.75	3.00
Cymene, drums	gal.	.90	1.25
Diphenyl oxide	lb.	.50	.55
Eucalyptol, U.S.P.	lb.	.80	.85
Eugenol, U.S.P.	lb.	1.75	2.00
Geraniol, Domestic	lb.	.60	3.00
Imported	lb.	2.00	3.00
Geranyl Acetate	lb.	1.20	2.50
Heliotropin	lb.	3.00	3.20
Hydroxycitronellal	lb.	2.00	2.50
Indol, C. P.	lb.	32.00	34.00
Ionone	lb.	2.50	4.15
Iso-Eugenol	lb.	3.00	4.25
Linalool	lb.	2.10	3.30
Linalyl Acetate	lb.	2.50	3.00
Menthol	lb.	3.00	—
Methyl Acetophenone	lb.	2.50	3.00
Anthranilate	lb.	2.10	2.25
Paracresol	lb.	4.50	6.00
Salicylate, U.S.P.	lb.	.35	.37
Musk Ambrette	lb.	3.65	3.95
Ketone	lb.	3.70	4.10
Xylene	lb.	1.05	1.20
Phenylacetaldehyde Sp.	lb.	2.10	2.50
Phenylacetic Acid	lb.	1.75	3.00
Phenylethyl Alcohol	lb.	2.50	3.35
Rhodinol	lb.	5.55	10.80
Safrol	lb.	1.00	1.10
Terpinol, C. P., drs.	lb.	.25	—
Cans	lb.	.28	—
Terpinyl Acetate, 25 lb. cans	lb.	.82	.85
Thymol, U.S.P.	lb.	1.55	1.60
Vanillin, U.S.P.	lb.	2.50	2.65
Yara Yara	lb.	1.25	1.55

Insecticide Materials

Insect Powder, bbls.	lb.	.31	.33
Pyrethrum Extract			
5 to 1	gal.	1.65	1.80
20 to 1	gal.	6.10	6.30
30 to 1	gal.	9.15	9.45
Derris, powder—4%	lb.	.18	.21
Derris, powder—5%	lb.	.23	.26
Cube, powder—4%	lb.	.17	.20
Cube, powder—5%	lb.	.22	.25

Gums

Arabic, Amb. Sts.	lb.	.09¾	.10
White, powdered	lb.	.14	.14½
Karaya, powdered No. 1	lb.	.14	.33
Tragacanth, Aleppo, No. 1	lb.	2.65	2.70
Flake	lb.	No Prices	

Waxes

Bees, white	lb.	.38	.39
African, bgs.	lb.	.26	.27
Refined, yel.	lb.	.31	.36
Candelilla, bgs.	lb.	.18	.18½
Carnauba, No. 1, yellow	lb.	.79	.80
No. 2, N. C.	lb.	.74	.76
No. 3, Chalky	lb.	.64	.65
Ceresin, yellow	lb.	.11½	.15
Paraffin, ref., 125-130	lb.	.0675	.0680

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Production Section

A section of SOAP devoted to the technology of oils, fats, and soaps published prior to Jan. 1, 1932, as a separate magazine under the title, *Oil & Fat Industries.*

Soap Coloring

WATER-SOLUBLE alkali-resistant dyes are used for the most part to color soap, those belonging to the acid aniline class. These are used both for cold process soaps and for milled soaps. Their application is simple, the dye being dissolved in boiling water, strained through cloth and added to the soap mass. With milled soaps, the dye solution is added in the crutcher. From three to four liters of hot water are used to dissolve 100 grams of soap dye. Straining through cloth removes any particles of dyestuff which remain undissolved and which would show up later as colored specks in the soap. Some dyes of this class require addition of soda ash or of alcohol to effect solution. The dye should be prepared in glass, earthen or enamelled vessels but not in metal as the latter exerts a reducing action on the dyestuff, causing partial decolorization.

The color obtained with the dye depends on various conditions. A soap stock which is itself dark in color naturally cannot be dyed to give a clear light-colored soap. Aniline dyes, unlike pigments, have no covering power of their own. Soap cannot be made to appear lighter with dyes than it was to start with. Careful adjustment to produce a neutral soap mass is important, particularly when a delicate light shade is desired. If the soap mass changes in composition on standing, this will affect the color, a result which is sometimes blamed on the dye when the latter was not at fault.

Other causes can lead to poor results. If the dye solution is too concentrated when added to the soap mass, a part may precipitate or recrystallize, a danger which holds particularly for difficultly soluble dyes. In such cases it is advisable to dissolve the dye in boiling water, making a rather dilute solution, let it cool and then filter through cloth before adding to the soap.

Dyes may be affected by incomplete saponification and by the presence of excess alkalinity. Traces of metals such as iron or copper are particularly harmful. Even minute specks may have a catalytic action and produce spotting in the soap. The water used must contain no iron. Unsuitable odorants may affect the dye. The fats and oils themselves may act on it, especially oils that have been bleached by the use of either oxidizing or reducing agents, in which case a trace of the bleach may remain in the soap to affect the dye adversely.

The usual preference is for light colored soaps. This helps avoid the danger of the soap leaving a color on white washed goods. Dark brown, dark green or black soaps should be avoided because they are apt to stain the washed materials. Certain points should be observed in coloring soap: The lighter the color desired, the greater pains should be taken in preparation of the soap stock. Light colored soap should never be exposed in show windows to the action of strong sunlight, since the small amount of dye used to give the light color is usually easily bleached.

In addition to the water-soluble dyes for soap, insoluble dyes or pigments are also used. They are applied in coloring milled soaps. Pigments are characterized by good light-resistance. They are added in paste form to the soap mass and must be thoroughly mixed in.

For completeness, oil-soluble soap dyes might be mentioned. These are dissolved in warm oil and added to the soap while it is still semi-fluid. The oil is warmed on a water bath and 10-20 grams of dye dissolved per liter of oil, with prolonged stirring. In practice this method is of little importance. W. Richter. *Fette und Seifen* **47,** 61-2 (1940).

The Canadian Government Purchasing Standards Committee has recently issued a specification for low-titre chip soap and powdered soap for laundry purposes, which include the following points: The soap shall yield not less than 80 per cent of fatty acids which shall have a titre of not more than 28° C. Matter insoluble in water shall not exceed one per cent. Free alkali expressed as sodium hydroxide shall not exceed 0.15 per cent. Free acid expressed as oleic acid shall not exceed 0.5 per cent. Chlorides expressed as sodium chloride shall not exceed 0.5 per cent. *Laundry & Dry Cleaning J. of Canada* **20,** No. 1, 16 (1940).

Saponification Velocity

Fats and oils were saponified in a homogeneous medium consisting of benzene and alcoholic potassium hydroxide solution. At lower temperatures, fish oil was more easily saponified than vegetable oils. The saponification of the solid fats was more rapid than that of the oily fats at 30° C. The reaction velocity at 30° was large at the beginning of the saponification and then diminished. The reaction was special and irregular.

When the amount of the fat was larger than that of potassium hydroxide the reaction velocity diminished. The velocity of reaction was also changed with the concentration of potassium hydroxide solution. Castor oil and perilla oil were saponified more rapidly by alcoholic potassium hydroxide than sardine oil and olive oil. This may be related to the solubility of the oils in alcohol. In the saponification of the glycerides of fatty acids the effect of the molecular weight was not outstanding. Toyoki Ono. *J. Agr. Chem. Soc. Japan* **15,** 843-56, 953-65; through Chem. Abs.

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Soap Saving for Laundries

A short formula for white goods represents a saving in soap, water and steam in the laundry. As developed the new method starts with a break at 125-135° F., with all of the alkali to be used added at this stage, plus sufficient neutral soap to give a good running suds. The pH of the break liquid is desirably 11.1-11.4. The use of sulfonated compounds for wetting-out purposes is beneficial, a concentration of 0.05 per cent in the wheel being sufficient. Two suds only are used except for badly soiled goods. The pH falls progressively as no more alkali is added unless more than two suds operations are required. Bleaching with 1-1.5 quarts of 1 per cent hypochlorite per 100 pounds of work is carried out in the second suds. Two hot and two warm rinses follow the second suds, then the usual sour and blueing. Tensile strength losses are lower with a short formula than with the usual long formula. A large number of test bundles processed with this formula showed excellent whiteness and good detergency results. Stains did not appear to be set at this temperature for the break.

A very satisfactory alkali for use in the break is some form of silicate. The pH of dilute solutions of the three forms is given in the table:

Compound	pH at 77°F. (25°C.) 0.05% solution	0.1% solution
Sodium metasilicate	11.2	11.5
Sodium sesquisilicate	11.4	11.6
Sodium orthosilicate	11.6	11.8

A smaller amount of orthosilicate can be used to give the desired pH than of metasilicate. The use of alkali carbonates in the modified short formula has so far yielded disappointing results. C. H. Bayley. *Laundry & Dry Cleaning J. of Canada* **20,** No. 3, 8-9, 30 (1940).

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Chlorides in Milled Soap

It is of importance that excessive chlorides be absent from soap which is to be milled, if danger of cracking and difficulty of compression are to be avoided. The maximum amount of chloride regarded as safe does not exceed 0.3-0.4 per cent. A reliable method of analysis for chlorides must be used, to avoid disputes between buyer and seller. Ashing methods are best avoided, as there is always danger of volatilization and loss of chloride, with consequent low results. A suggested procedure is precipitation of the soap by addition of calcium nitrate and determination of chloride in the supernatant liquid. *Perfumery & Essential Oil Record* **31,** 106-7 (1940).

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Metals in Soap

Danger of contamination of soap by such metals as copper or iron has frequently been noted. Not only may such contamination occur during saponification and during the subsequent drying, milling and plodding, but metallic impurities are sometimes introduced in the raw materials themselves, as in the alkali used for saponification. One of the recently discovered sources of such contamination is pale rosin. A small amount, usually 1-2 per cent, of rosin is now commonly present in most toilet soaps, and naturally a light-colored rosin is used for the purpose. Unfortunately the paler rosins are found to be more prone to contain iron or copper than are the darker varieties,—apparently the metals are picked up in the refining plant. No rosin should be accepted for use in making toilet soap until it has been tested and found reasonably free from such impurities. *Perfumery & Essential Oil Record* **31,** 106 (1940).

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Bottle Washing

When aluminum labels and foils are present in bottle-washing solutions, the latter are weakened by reaction of aluminum with the caustic soda. Sodium aluminate is formed and is much less effective as a disinfectant than caustic soda in concentrations of 1-2 per cent. Hence care is required to maintain alkali strength where aluminum caps and foils pass through the soaker washers for glass bottles. C. A. Shillinglaw and Max Levine. *Food Ind.* **12,** 41 (1940).

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Fatty Acid Determination

The determination of fatty acids in soap containing kaolin requires a special procedure. About 0.5 gram of soap is dissolved in hot water and transferred to a large separatory funnel. A few drops of methyl orange are added after which hydrochloric acid is added with shaking, until the solution remains red. The mixture is shaken with 50 cc. of ether to extract the liberated fatty acids. Another 25 cc. of ether is added and the mixture allowed to stand an hour. The aqueous layer is drawn off, the ether washed with a 10 per cent solution of sodium chloride and the wash liquid carefully drawn off. The funnel is dried around the neck with filter paper and 3-5 grams of anhydrous sodium sulfate introduced to remove the rest of the water in the ether solution. When all of the water has been separated from the ether, the latter should no longer be turbid from the presence of suspended kaolin. The dried ether solution is filtered through a dry funnel into a dry distillation flask, the ether distilled off and the fatty acids weighed. Oskar Hagen. *Seifensieder-Ztg.* **67,** 72 (1940).

Hydrocarbon Soaps

SOAPS made by saponification of the oxidation products of high molecular-weight hydrocarbons such as paraffins, possess a dark color and more or less unpleasant odor. Methods of purification to remove these objectionable features have for the most part been very cumbersome. For example, the fatty acids have been separated from the soap solutions by means of mineral acid, then purified by distillation and again transformed into soap by treatment with alkali. Such methods involve loss of the crude material, waste of alkali and acid.

A new method of purification is described in German Patent No. 627,808 by the I. G. Farbenindustrie A.-G. According to this it is possible to obtain pure soap products suitable for general detergent use by dissolving the oxidized paraffin products in a water-immiscible solvent or mixture of solvents and treating this solution with an aqueous solution of alkali hydroxide, alkali carbonate, ammonia or water-soluble amine. In this way an aqueous soap solution is obtained which can be separated from the nonaqueous solution and extracted with the solvent used previously or some other nonaqueous solvent, to remove unsaponifiable matter. The treated soap solution is then evaporated to dryness.

As starting materials for this method, the oxidization products of paraffin, mineral oils or petroleum fractions are used, as well as the hydrogenated products obtained from coal, tar, etc. Suitable solvents immiscible with water are benzine, benzol, cyclohexane, cyclohexanone, tetrahydronaphthalene, carbon tetrachloride, benzine and ethyl alcohol mixed, or other mixtures of these solvents. The oxidation products are dissolved in the organic solvent at ordinary or increased temperatures and the solution obtained is treated with the aqueous solution such as that of caustic soda, methyl or ethyl amine or other solution of an alkaline nature. The amount of alkali solution varies according to the composition of the oxidation products. The two solutions are well mixed, allowed to separate into layers, and the soap solution drawn off. In order to separate unsaponifiable constituents completely, the soap solution is washed with a solvent immiscible with water and separated from this wash liquid. The soap solution is next filtered and evaporated on roller driers or in some other drying apparatus.

By this method soaps are obtained which possess practically no bad odor and which can be worked directly into soap cakes or other form of washing agent. This method has no relation to the previous methods of soap preparation from acid oxidation products of hydrocarbons. Soaps made according to the above method are not only free from unpleasant odors but are also light in color.

As an example, hard paraffin is oxidized with air at 120-150° C. in the presence of sodium palmitate and manganese palmitate as catalyst, according to known methods. Twelve hundred parts of the oxidation product obtained, having a saponification number of 149, are dissolved in a mixture of 2400 parts of benzine and 600 parts of alcohol. The solution is stirred at 56-58° C. with a solution of 184 parts of soda ash in 920 parts of water for a half hour. After the mixture has separated the soap solution is drawn off, extracted with 1200 parts of benzine and evaporated to dryness on a roller drier. *Allgemeine Oel-und Fett Ztg.* **37,** 11-12 (1940).

Fats from Waste

Various methods have been developed for recovering fats from garbage. The best fats obtained from such refuse approach the low grade tallows in quality, but the poorer grades are usually dark in color and offensive in odor. As they are not readily refined they are preferably split and distilled, when they yield good-quality, pale oleins and stearines. Sewage fat is recovered from some types of sewage discharge. Unsaponifiable matter is usually removed by saponifying the grease and extracting with solvent. The soap appears as a light brown flaky powder, practically odorless. Garbage and sewage fats are not suitable for toilet soap but for general scouring soaps they provide excellent substitutes for the more expensive fats. They are most suitable for soaps to be used in hot water as the soaps are not very soluble in cold water. H. K. Dean. *Soap, Perfumery and Cosmetics* **13,** 99 (1940).

Non-Soap Washing Agents

The importance of fat-free washing agents is emphasized in Germany. Among the many points to be considered in their preparation and evaluation are the following: When intended for personal use the products should not contain more than 0.2 per cent of free caustic alkali calculated as NaOH and not more than 5 per cent of alkali carbonate calculated as anhydrous Na_2CO_3. For hand-washing in factories, 15 per cent of alkali carbonate may be present. Scouring agents should not contain more than 5 per cent of free caustic soda and not more than 15 per cent of anhydrous soda ash. Washing agents of any kind may not contain more than 50 per cent of sodium silicate or its decomposition products, calculated to a 38° Be. solution, with the exception of some paste products where a higher silicate content offers special technical advantages.

Non-detergent "fillers" may be present in water-soluble washing powders up to a maximum of 25 per cent. Examples are sodium chloride and glauber salt, Na_2SO_4. $10H_2O$. Oxygen-containing washing agents must have a content of at least 0.5 per cent of active oxygen in such a form that it will not lose more than one-fifth of this value after two months' storage. Ammonia and ammonium salts are in general not used so that these materials may be set aside for more important purposes. Walter Meyer. *Deutsche Parfümerie Ztg.* **26,** 29-31 (1940).

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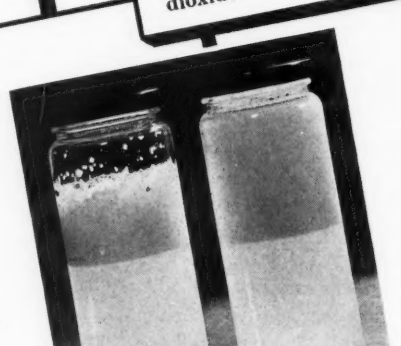

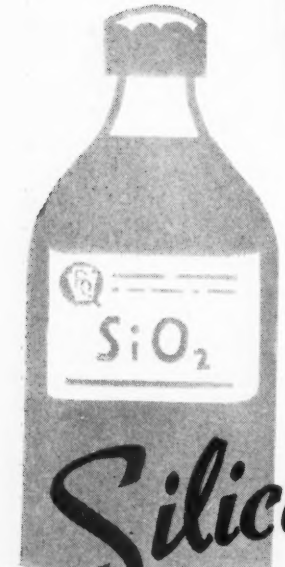

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Water Softening

HARD water is softened before use to avoid loss of soap and the poor results obtained by washing in hard water. Water softening in the small laundry and in the home is usually carried out by the addition of special water-softening agents, since this method is simple. Soda ash and other alkaline agents combined with soda are much used for the purpose, such as silicates and phosphates. These react with the soluble calcium and magnesium salts present to form insoluble carbonates, silicates and phosphates and leave the water soft.

The amount of agent to be used depends on the hardness of the water. One gram of calcium salt changes 15 grams of curd soap into calcium soap. With one cubic meter of water of 10 German degrees of hardness, 1½ kg. of curd soap is rendered useless. The same amount of hardness in the same amount of water would require about 190 grams of soda ash. Usually "bleaching soda" is used, which contains sodium silicate in addition to calcined soda. This has several advantages over pure soda ash alone. Soda is not a complete water softener because it removes only sulfate hardness. Soda ash will react with bicarbonate only when a large excess of the former is present, which is an undesirable condition. In practice only a small excess of soda is used, which will act in about a quarter hour to remove calcium hardness in the form of a crystalline precipitate. The small excess of soda remaining in solution serves as a soap builder and as a neutralizing agent for acid soil.

The rate at which the softening takes place is greater with an increase in temperature. At ordinary temperatures, water of 10-14 degrees of hardness can be softened in 15-20 minutes. At 30° C. (86° F.) the same water can be softened in two minutes by the same reagents. A commercial softener contains 50 per cent of soda ash, 8 per cent of sodium silicate on a dry basis, some phosphate and water. This softens water much more quickly than the usual calcined soda and gives a greater degree of softening. The softening agent should be added to the water and allowed to act before the soap is introduced. Otherwise it fails to fulfill its purpose completely as some soap will be precipitated.

Sodium silicate reacts, not to give a crystalline precipitate but a soft hydrated gel which is easily rinsed away. It is a wetting and emulsifying agent, promoting the wetting of the goods being washed and aiding in the suspension of solid particles of soil. It also helps to prevent yellowing of goods by iron in the water. Other compounds which form precipitates with calcium and magnesium are not as efficient as water softeners in combination with soda, and are not used, as practically all of these products are based on soda ash. A. Foulon. *Allgemeine Oel- und Fett-Ztg.* **37,** 8-10 (1940).

◆

Rancidity in Dry Cleaning

The accumulation in Stoddard dry cleaning solvent of substances associated with rancidity was studied. The increase in the fatty acid content of dry cleaning solvent during a series of cleaning operations is due largely to free fatty acids present in the soap additions rather than to fatty acids present in the soil from the garments.

Rancid odors on the garments were detected on runs made shortly after the filter was cleaned. This indicates that relatively thick layers of filter powder and soap adsorb part of the odor-forming substances. The acid number cannot be accepted as a criterion of incipient rancidity without reservation. The Kreis test and peroxide determinations in a modified form can be applied successfully to dry cleaning solvents and are useful in detecting the earlier stages of rancidity. The Kreis test, as carried out by a modification of Neu's method, has been applied and found to give satisfactory results in detecting incipient rancidity. Three series of test runs were made with soap, and in each case a positive Kreis test was obtained before odor was detected on the garments.

Peroxides formed during the cleaning operations decomposed in the drying cabinet and gave rise to aldehydes and low molecular-weight acids. Application of electrometric titration to alcoholic solutions of residues obtained from evaporation of used solvents indicates a buffering effect of low molecular-weight acids which form as rancidity develops.

The sulfuric acid absorption test for unsaturated substances on which many dry cleaners have relied for checking the condition of their solvent with respect to rancidity, has been shown to be unsuitable for this purpose. Adrian C. Smith, Charles S. Lowe, and George P. Fulton. *Ind. Eng. Chem.* **32,** 454-60 (1940).

◆

Grape-seed Oil

Grape-seed oil is being increasingly used as a soap material in Germany and Italy. At one time the oil was considered similar to castor oil in character, but this has been shown to be incorrect. With an iodine value of 100-135 and a titre of about 20° C. the oil is more similar to soybean oil. Some 1500 tons of the oil per year are available in Germany as a by-product of the wine industry. It is only recently that much attention has been paid to it. Freshly expressed grapes yield 25 per cent of seeds which contain 15-20 per cent of oil. The oil varies from light yellow to dark olive green, according to the method of production. *Perfumery & Essential Oil Record* **31,** 106 (1940).

◆

Recovering Dry Cleaner

After volatile solvents have been used for dry-cleaning fabrics in a scouring apparatus, the used solvent is withdrawn from the scouring apparatus and mixed with activated magnesia. Solvent and magnesia are subsequently separated and the solvent thus purified is returned to the cleaning tank. Westvaco Chlorine Products Corp. Canadian Patent No. 387,685.

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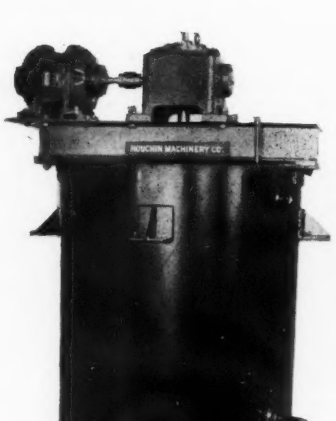

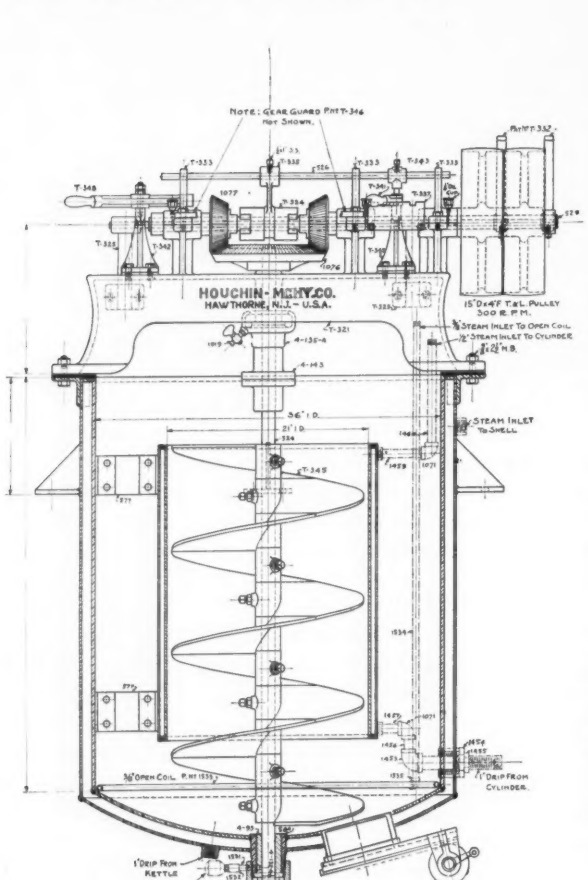

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Caustic Soda Production

Anhydrous caustic soda was prepared continuously from a 50 per cent solution on a small pilot-plant scale, utilizing the partial-pressure evaporation process of Kokatnur to drive off solvent water and the water in the several hydrates. Kerosene was used as a diluent in the evaporation; that remaining on the solid particles was removed by centrifuging and washing with a solvent. This solvent was then purified by distillation for re-use. The total heat cost was calculated at about 350 pounds of coal per ton of caustic from 50 per cent solution. (about 150 pounds from 70 per cent solution), or one-third the present cost in the usual caustic fusion.

Because of the protective film action of the kerosene, practically no corrosion of equipment was noted and it appears that production equipment might be fabricated of steel. The material produced was of high purity. It was a fine powder which was of a crystalline nature, free flowing, and apparently of more rapid chemical reactivity because of its greater surface area. The process is a matter of minutes rather than days in the usual fusion process. Donald F. Othmer and Joseph J. Jacobs, Jr. *Ind. Eng. Chemistry* **32,** 154-160 (1940).

Plodding Causes Cracking

In spite of numerous other reasons offered for soap cracking, the trouble is laid to one or more factors connected with the plodding operation, according to Harry A. Johnson, soap maker at the Colorado State Penitentiary at Canon City, Colo. He states:

"A great deal of discussion has taken place regarding the cracking of soap and any number of reasons have been given as the cause. From my experience in manufacturing toilet, laundry, floating and laundry soap, it looks to me that the main cause of the trouble lies in the plodding. When we hear about too much moisture making soap crack, I notice laundry soap that does not go through the plodder will never crack and it can be moist enough so you can stick your finger in it. When the same soap dries it will be hard and slick. Also floating soap that does not go through the plodder can have a good percentage of moisture and will not crack when it dries. I have noticed that soap chips that are too dry will not look as good after they come through the plodder as ones that carry excess moisture. The more plastic the soap, the better for plodding. Shaving soap that contains more glycerine doesn't seem to crack. A little lanolin and sulfonated castor oil used as a superfatter in the finished soap will help to keep it more plastic. This should be mixed well while the soap is in the crutcher.

The temperature of the room plays an important role in toilet soap. If it dries too quickly, it seems as though the soap forms a hard crust on the outside, and the moisture on the inside coming out to the hard surface that has cooled too fast doesn't seem to be so good. My experience with toilet soap after it is stamped from the plodder and then boxed immediately so that dehydration does not take place so quickly, is smoother and does not crack, while the soap that is left out and exposed to the air and dries too fast isn't in as good shape as the soap that has been boxed and not permitted to dry too fast."

Synthetic Detergents

(*From Page* 35)

of the Lamepons on textile fibres in combination with effective detergent action appears to be a property peculiar to compounds with the molecular constitution of these products. They show little of the strong extracting action on the natural basic constituents of the fibres, the breaking down and removal of which in some cases appears to interfere seriously with strength and resilience. During bleaching, they have a similar protective effect by slowing down the action of chlorine or oxygen through combining chemically with these agents and subsequent retarded liberation. Prevention of loss of these gaseous bleaching agents in this way forms the basis for a claim of greater bleaching efficiency.

Of chief interest with the beginning of manufacture of the Lamepons in the United States, is the possible extension of uses of these products to fields other than textile processing where they have been more or less well known. These potential uses are numerous particularly in the manufacture of special non-soap detergents and cleaners for both industrial and household purposes, as emulsifying, spreading and wetting agents in the application of insecticide sprays, animal dips and disinfectants, moth proofers, oil polishes, and the like, in the manufacture of non-soap shampoos, dentifrices, and cosmetics, and as dispersing agents in the manufacture of printing inks, paints and varnishes, wax products, etc.

Because of their indicated harmless detergent action, interest is aroused in the Lamepons as the base for rug and upholstery detergents, fine household washing agents for hard-water districts, and soapless shampoos. In the case of the latter, and also of interest in dentifrices and cosmetics, it is pointed out that they have been used abroad for several years for these purposes and found to be non-toxic. Their uses have also extended abroad to inclusion in regular household and industrial soaps, metal washing and scouring compounds, and glass and mirror cleaners. The concentration of Lamepons in use depends upon the operation, scaling from a small fraction of one per cent up to twenty per cent for certain heavy operations.

For soapless shampoos, the particular Lamepon used, shows some unusual properties, also being slightly acid, pH 6, in contrast to the usual alkalinity of soap shampoos. It gives a profuse and quick lather, but is stated not to remove too great a proportion of the natural oil from hair and scalp. This latter is held to be the cause of excessive hair dryness when the detergent action is too intensive. The indicated protective action of the Lamepons in washing organic fibres is in the case of shampoos indicated to be of material advantage.

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Products and Processes

Paste Hand Soap

A hand soap of good quality is prepared as follows: I. Five parts of kaolin or bentonite are mixed with three parts of fine sand or pumice powder and two parts of wood flour. II. Five parts of calcined soda ash, four parts of 40° Be. caustic soda solution, and four parts of Tylose are dissolved in 90 parts of hot water and emulsified with 1-2 parts of neutral wool fat. Mixture I and solution II are worked up into a paste; 2-3 per cent of foaming agent such as saponin can also be worked in or can be admixed with the powdered ingredients. *Seifensieder-Ztg.* **67,** 44 (1940).

Rapid Soap Production

According to British Patent No. 504,118, soap is produced by an inexpensive process in the form of pure dry soap with the glycerine separated. Saponification is carried out in a stream of super-heated steam at a sufficiently high temperature to keep the anhydrous soap molten. The melted soap is converted into a spray by the stream of super-heated steam, volatile ingredients pass off with the steam, and solid soap is collected in a container. Through *Allgemeine Oelune Fatt-Ztg.* **37,** 14 (1940).

Bleaching Soap

Potassium persulfate is an oxidizing bleaching agent used for bleaching soap. During reaction it gives up oxygen with the formation of sulfuric acid. This means that sufficient alkali must be present in the soap to neutralize the acid formed, otherwise an equivalent amount of soap will be decomposed with the separation of fatty acids. From 0.5 to 1 per cent of potassium persulfate is used, based on the amount of fat. The bleaching compound is stirred into cold water in a wooden or enamelled vessel, then added to the emulsion of fat and lye, which is worked up further the same as in the absence of bleach. The soap formed should be somewhat alkaline as after-bleaching will go on in the soap with the consumption of alkali. *Seifensieder-Ztg.* **67,** 63 (1940).

Textile Agents

The property of quaternary ammonium compounds when used as textile agents, of being adsorbed by the fibers can be at least partially explained on the basis of their chemical nature. Wool in alkaline solution is electro-negative in charge and therefore combines with or adsorbs the electro-positive quaternary compound. For this reason quaternary compounds cannot be used successfully for washing wool in an alkaline medium, the washing agent being removed from solution and adsorbed on the fiber. Wool, like all proteins, is amphoteric and can behave as either an acid or a base. Wool can be washed with the aid of quaternary compounds in acid solution, as apparently under these conditions the wool changes the sign of its electrical charge. J. Wakelin. *Textile Colorist* **62,** 159-60 (1940).

Synthetic Detergents

Development of a new series of compounds having marked detergent and surface-active effects has been announced by the Onyx Oil & Chemical Co. The compounds are known as Xynomines and are sulfated boro amide esters of alkyl compounds containing 12-18 carbon atoms. They are soluble in hard water, in acid or alkali, and disperse lime and metallic soaps. *Textile World* **90,** 74-5 (1940).

Soapless Detergent Pastes

For the preparation of a paste product which gives an opalescent soap-like solution, a mixture of sodium silicate and sodium bicarbonate is used. The gel is stabilized by the incorporation of a small amount of magnesium hydroxide to prevent hardening. A product which can be used as a substitute for toilet soap and shaving soap is prepared by stirring together gum tragacanth in aqueous saponin solution, sodium silicate, rosin and ammonia. W. Meyer. *Fette und Seifen* **47,** 23 (1940).

Detergent Powder

A stable neutral detergent powder, non-caking and readily soluble in water, comprises a spray-dried mixture of the sulfosuccinic ester of an aliphatic alcohol having 5-8 carbon atoms, and a water-soluble, non-hygroscopic carrier such as sodium sulfate which is stable at spray-drying temperatures and the saturated solution of which has a pH of 6.5-8.5. C. R. Caryl and A. O. Jaeger to Am. Cyanamid & Chemical Corp. U. S. Patent No. 2,181,087.

Sulfonated Oils

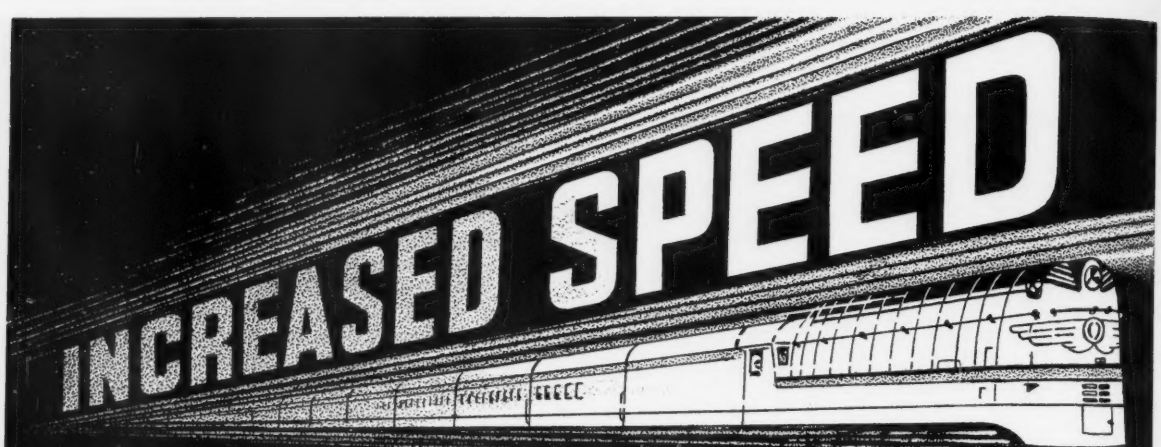
The employment of boric acid in the manufacture of Turkey red oils is claimed in German Patent No. 682,590 to result in the production of pale colored sulfonated oils, even when the sulfonation is carried out by means of fuming sulfuric or chlorosulfonic acid. It is claimed that the presence of boric acid renders the sulfonation process much easier to regulate and results in products of greater stability. *Chem. Trade J. & Chem. Engineer* **106,** 179 (1940).

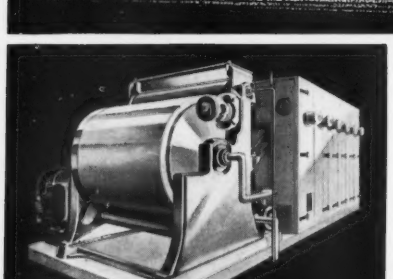
Disinfectant Hand Soap

The addition of 1-2 per cent of the sodium salt of toluene sulfonchloramide to hand soaps gives them a germicidal action. The disinfectant compound is known commercially as Chloramine. *Seifensieder-Ztg.* **67,** 73 (1940).

Mixed Cleaning Agent

A cleaning composition contains as its essential ingredients a concentrated aqueous solution of soap, ammonia and sodium thiosulfate, together with a sufficient quantity of Javel water and gasoline to insure thorough wetting and bleaching. Joseph A. Livesque. Canadian Patent No. 387,366.





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State Chemical Mfg. Co., Cleveland, has issued a new 124-page catalog covering its line of sanitary supplies.

699—Insecticide Booklets

S. B. Penick & Co., New York, have just revised their booklet "Red Squills," describing the manufacture, and most effective use of this material for rodent control. They have also issued in revised form their booklet dealing with the rotenone insecticides derived from derris, cube and timbo roots. The characteristics, composition and uses of these insecticides are discussed.

700—Polyvinyl Alcohols

R. & H. Chemicals Department, E. I. du Pont de Nemours & Co., Wilmington, is now distributing a new technical bulletin describing a new series of water-soluble vinyl resins, the polyvinyl alcohols. It is said that these compounds have been found useful as sticking and spreading agents for insecticides containing nicotine and also as emulsifying and extending agents for soaps and cosmetics.

Decolorizing Agent

A decolorizing and filtering agent is produced by reducing kieselguhr and wood to powders and mixing. The mixture is then heated until vapors are substantially eliminated. The heated product is activated by contacting it with steam or combustion gases at a high temperature. The Evanston Co. Canadian Patent No. 387,415.

Alkyl Amine Hydrochlorides

In the second of a series of reports on detergents made from kerosene, a kerosene fraction boiling at 95-100° C. at 15 mm. pressure was chlorinated to yield about 85 per cent of monochlorides, which were converted to *N,N*-diethanolkerosylamine by digesting with diethanolamine for about 18 hours at 185° C. Laurylamine, *N,N*-diethyllaurylamine, and *N,N*-diethanol-laurylamine and the corresponding chlorides were prepared for use as reference compounds. The amine hydrochlorides were tested against sodium lauryl sulfate as a standard by use of the drop number test and a foam test. Laurylamine hydrochloride is comparable to sodium lauryl sulfate by the drop number test, but all of the other amine salts are notably less satisfactory. By the foam test, laurylamine hydrochloride as well as the other salts gave less satisfactory results than did sodium lauryl sulfate.

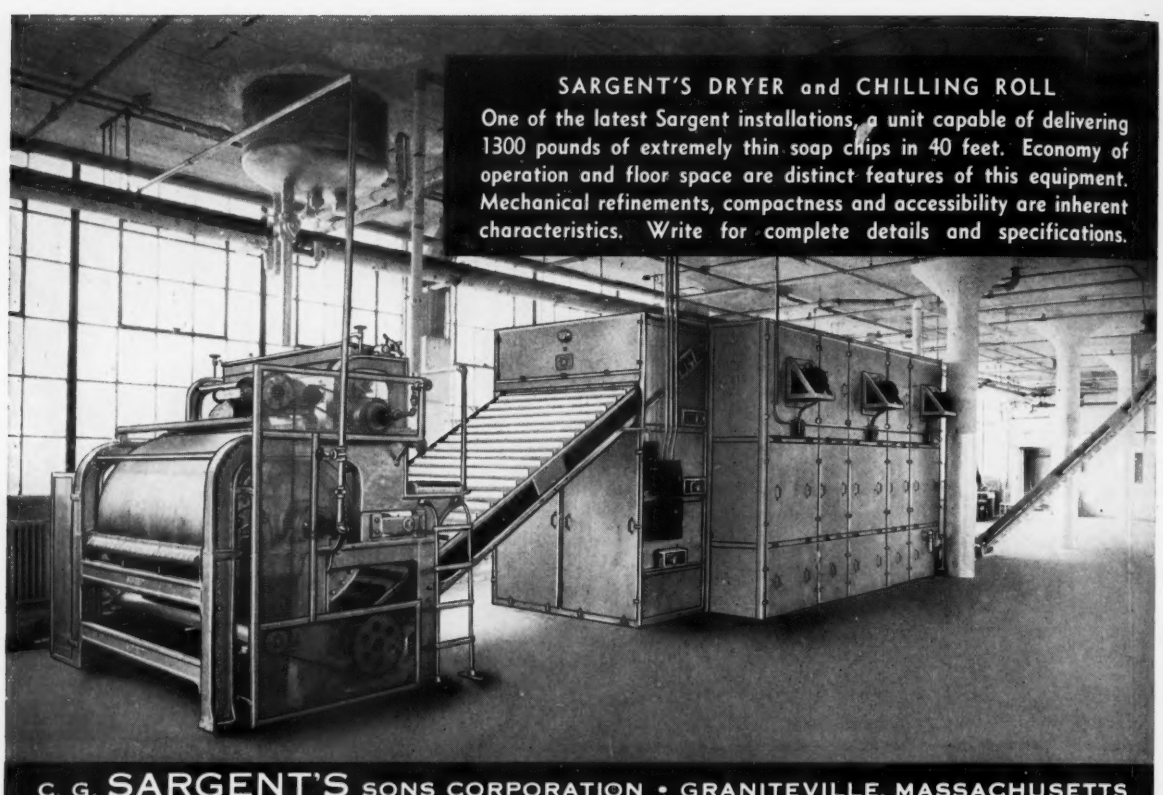
The results indicate that the primary amine hydrochlorides compare more favorably with sodium alkyl sulfate than do the secondary amine hydrochlorides, and the amine hydrochlorides prepared from the kerosene fraction are the least satisfactory of those tested. A. R. Padgett and Ed. F. Degering. *Ind. Eng. Chemistry* **32,** 486-8 (1940).

Phosphate Determination

The analysis of phosphates in soap by the A.O.C.S. method has previously been applicable to orthophosphates only. Since many soap products now contain pyrophosphates, it is desirable to modify the method to include these. This can be accomplished by hydrolyzing the pyrophosphate to orthophosphate by heating the dilute phosphate solution with nitric acid for a short time. Total phosphates are then determined by precipitation as ammonium phosphomolybdate, redissolving the precipitate and determining volumetrically. The method does not differentiate between the different kinds of phosphate originally present, but is accurate to 1.5 per cent for total phosphates. L. B. Parsons and C. F. Haberstroh. *Oil & Soap* **17,** 62-4 (1940).

Coconut Oil from Fresh Nuts

Coconut oil obtained directly from fresh coconut meat by expressing the milk by roller press, centrifuging and coagulating the proteins, was analyzed for its physical and chemical properties. Its composition was determined by converting the glycerine esters of the oil into fatty acids, methylating them and fractionating the methyl esters. The average percentages of fatty acids from three distillations are: caproic 0.38 per cent, caprylic 6.54, capric 8.95, lauric 55.06, myristic 16.89, palmitic and stearic 7.36, oleic 4.01 and linoleic 0.81. Butyric acid was not present in detectable amounts in the mixed fatty acids. D. M. Birosel, F. Millar, Jr., E. Nessia and F. Tagorda. Univ. *Philippines Nat. and Applied Sci. Bull.* **7,** 39-49; through Chem. Abs.



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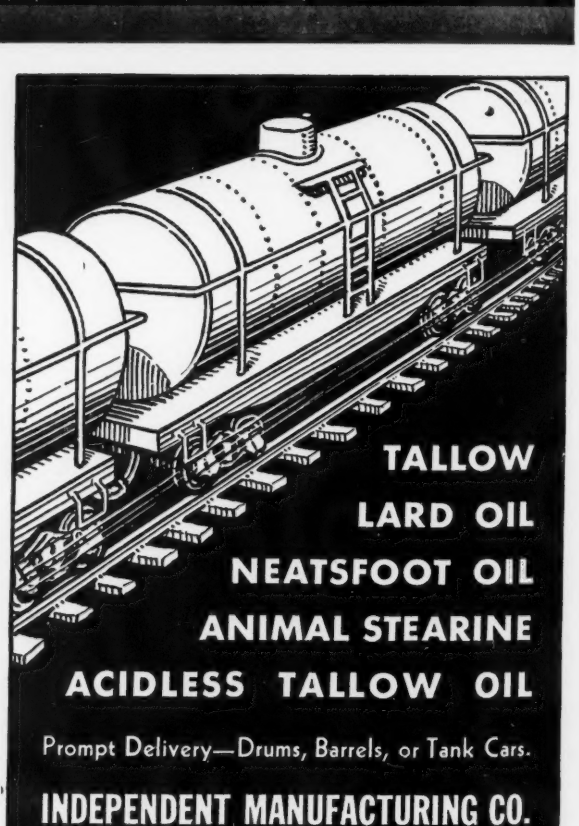

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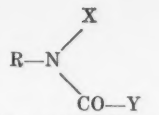
No. 2,192,347, Insecticide, Patented March 5, 1940 by Mark L. Hill, Yeadon, and Bassett Ferguson, Jr., Ridley Park, Pa., assignors to Gulf Oil Corporation, Pittsburgh, Pa. An insecticidal spray comprising a mineral oil base, a minor quantity of para-tertiary-amyl-phenol, and an organic secondary solvent in amount sufficient to hold the para-tertiary-amyl-phenol solution in said base.

No. 2,192,689, Detergent Aids from Tetra-Isobutylene, Patented March 5, 1940 by Louis A. Mikeska, Westfield, N. J., assignor to Standard Oil Development Company. Tetra-isobutyl phenol sulfonic acid.

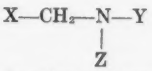
No. 2,192,713, Detergent Aid, Patented March 5, 1940 by Henry O. Mottern, Elizabeth, N. J., assignor to Standard Oil Development Company. Process for producing detergent aids comprising treating a low-boiling mono-olefin with sulphuric acid to secure a product comprising alkyl sulfates, "sulfo acids" and unreacted sulphuric acid, separating the resulting acid and hydrocarbon phases, hydrolyzing the alkyl sulfates in each phase, heating the resulting aqueous solutions to concentrate therein the sulfo-acid compounds, separating the compounds, separating the compounds and extracting purified sulfo-acid compounds with an organic solvent.

No. 2,192,894, Insecticide, Patented March 12, 1940 by Thomas S. Carswell, Kirkwood, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo. An insecticidal composition containing an amide of the general formula



in which R is a monovalent monocyclic hexahydrogenated aromatic hydrocarbon radical and X and Y are monovalent hydrocarbon radicals.

No. 2,192,927, Insecticide, Patented March 12, 1940 by Henry L. Morrill, Clayton, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo. An insecticidal composition comprising a compound of the general formula:



in which X is selected from the group consisting of phenyl, C-alkyl-substituted and C-halogen-substituted phenyl radicals; Y is selected from the group consisting of cyclohexyl, C-alkyl-substituted and C-halogen-substituted cyclohexyl radicals and Z is selected from the group consisting of alkyl, chloroalkyl and alkylol radicals, the compound being present in a concentration lethal to insects.

No. 2,193,241, Polish, Patented March 12, 1940 by Martin J. Seuberling, Cincinnati, Ohio, assignor, by mesne assignments, to Vegetable Oils Specialty Corp., Cincinnati, Ohio. A wood and metal polish, which comprises, abrasive particles enfilmed with a coating of shellac and mineral oil, the particles dispersed in water solution by the aid of an interfacial tension depressant, the composition by virtue of the relationship possessing the capacity to apply shellac evenly and uniformly to a surface as the abrasive removes dirt film from the surface.

No. 2,193,329, Soap Composition, Patented March 12, 1940 by John R. Curzon, Buffalo, N. Y., assignor to Harris Soap Company, Buffalo, N. Y. A soap composition comprising kettle soap and sodium silicate, the ratio of sodium silicate to soap being at least 4 to 10, an organic water soluble colloidal dispersing agent in quantity sufficient to make the soap and sodium silicate compatible, and a sudsing material selected from the group consisting of sodium pyrophosphate and sodium hexametaphosphate, the sudsing material being present in sufficient quantity to induce normal sudsing of the composition.

No. 2,194,446, Insecticide Emulsion, Patented March 19, 1940 by Richard Neu, Dessau-Rosslau, Anhalt, Germany, assignor to Deutsche Hydrierwerke Aktiengesellschaft, Berlin-Charlottenburg, Germany. A pest destroying aqueous emulsion consisting of a poison of the group consisting of rotenone, di-hydro-rotenone, pyrethrines, pyrethrum- and derris-root extracts; cyclo-hexanone; hydrogenated napthalene; with kerosene as a solvent; a fatty alcohol sulfonate having eight to ten carbon atoms in the molecule as an emulsifying agent and water, the cyclo-hexanone and hydrogenated napthalene being present in substantial proportions and sufficient to produce a clear and lasting solution.

No. 2,194,517, Insecticide, Patented March 26, 1940 by Euclid W. Bousquet, Wilmington, Del., assignor to E. I. du Pont de Nemours & Company, Wilmington, Del. An insecticidal composition containing a compound of the formula G—R (SCN)x, where G is a water-solubilizing polar group, R is an acyclic hydrocarbon residue of at least 10 carbon atoms, and X is an integer equal to the valence of R less one.

No. 2,194,665, Glycerin Recovery Process, Patented March 26, 1940 by Nathan M. Mnookin, Kansas City, Mo., assignor to Speas Development Co. In the process of recovering glycerin from an aqueous glycerin-containing solution, the step of treating the solution with a substantially water-immiscible combination of solvents to extract glycerin, one of the solvents of the combination being an organic compound selected from the class consisting of alcohols of higher molecular weight than ethyl alcohol, ethers and esters which is a solvent for glycerin at room temperature and another, different from the first named solvent, being an organic compound substantially immiscible in water selected from the class consisting of alcohols of higher molecular weight than ethyl alcohol, ethers and esters and at the same time a solvent for the first named solvent.

No. 2,194,858, Preparation for Toilet Soap, Patented March 26, 1940 by Reginald Wyatt Lawson, London, England. A method of reducing natural silk to the form of an impalpable powder consisting in freeing the silk of all foreign and deleterious matter and degumming the same, subjecting the resulting purified silk to the action of an aqueous solution of an alkali metal hydroxide so as to soften the silk but without dissolving the same, neutralizing the resultant product by means of an inorganic acid, water washing the neutralized product, drying the washed product, and grinding the dried product to an impalpable powder.

Continuous Soap Making

(*From Page 28*)

should not be more than sufficient to form the "neat" soap phase, in order to assure ease of handling. No application of heat is necessary in the mixer or subsequently, because the fatty acids as received from the autoclave system already contain an adequate amount of heat for the subsequent operations; having a temperature preferably in the neighborhood of 470° F. The saponifying agent does not need to be heated more than enough to have it in good pumping condition but it may be heated, if desired, to impart additional heat to the soap before spraying to secure maximum evaporation. The mixer must necessarily be kept under a sufficient pressure to prevent volatilization of the water at the temperature of mixing, and should be of sufficient size and capacity to keep the materials in contact with each other long enough to insure intimate contact and completion of the chemical reaction. This period need not ordinarily exceed one minute with an efficient mixer.

The hot soap mixture then passes directly to the spray nozzle **32** and issues therefrom into the spray chamber **33** in comminuted form. Inasmuch as the soap mixture reaches the nozzle at a temperature considerably above 212° F., usually about 250°-400° F., and under superatmospheric pressure, the pressure drops suddenly to that of the spray chamber, usually atmospheric pressure, with a consequent drop in temperature and instantaneous evaporation of a portion of the water content in the soap. In making my preferred form of product, cooling air is admitted at the bottom of the spray chamber through openings **34** in order to cool the product sufficiently to keep the particles from sticking together, and passes outward at the top through exhauster **35**, thus incidentally carrying away the water vapor volatilized from the soap mixture. The soap mostly falls to the bottom of the chamber where it can be continuously removed through air lock **36** for packaging, or for further processing into other forms if desired. Any fine material which may pass out of the top of the chamber with the air is caught in a suitable dust collector.

Other types of spray dried soap may of course be produced if desired, such as the well known Lamont product described in U. S. Patent 1,652,-900, by suitable modifications of the procedure in the spray drying chamber.

The air supplied to the spray chamber may be introduced in either a concurrent or counter-current direction with the flow of soap, and by suitable adjustments of the temperature of air, temperature of soap, and volume of air, practically any desired variation in moisture content, or size, of particles may be obtained.

The preferred soap product obtained as described is novel in consisting of feather-like, irregular shaped solid, not hollow, particles of size easily visible to the naked eye, substantially free from glycerin, and may contain practically any desired amount of moisture, percentages between 15 and 25 being especially desirable and readily obtainable, but ten per cent is approximately the lowest percentage readily obtainable in practical operation. A product with lower moisture constant may, however, be obtained by using molten caustic soda instead of an aqueous solution for saponifying. The particles mainly sink in water, but form a bulk product having a bulk density usually of about .25 to .40 as compared with water, due to irregular structure of the individual particles which prevents the particles from packing tightly together, very readily soluble, and fairly free flowing, nondusting and shows little or no tendency to lump or ball together in water. In these latter respects it compares favorably with spray dried products of the rounded, puffed, thin-wall type, such as those described in the patent to Lamont No. 1,652,900, which are noted for their ready solubility and their free flowing qualities, but which are light bulking and usually of low moisture content.

The glycerine solution continuously discharged from the autoclave in my process has a concentration of approximately fifteen to forty per cent, usually about twenty-four per cent under the preferred conditions described, and is substantially free from salts. This may be further concentrated by "flashing" or suddenly subjecting it to a lower temperature and pressure, in which case the concentration may be raised from twenty-four per cent to as high as thirty-two per cent glycerin. This is much higher than is obtainable in the commercial operation of other soap making and glycerin recovery processes. This solution is then subjected to the ordinary purification, evaporation, and distillation processes to obtain the pure glycerin of commerce. The recovery cost is obviously much lower than in prior known processes because of the higher initial concentration of the glycerin solution and absence of dissolved salts.

The comminuted soap thus obtained in this process can not only be used and sold as such, but it may also be readily converted into other forms of soap products such as flakes, bars, or extruded forms. For this purpose it is only necessary to produce first the comminuted soap having the formula and moisture content desired, and then pass it through rolls to convert it into flakes, or through suitable rolls and plodders or other known equipment to convert the particles into the form of extruded bars.

Shaving Cream

A shaving cream high in wetting power which should have a rapid softening effect on the beard is made from the following: 25 parts of white, amorphous stearic acid, with a titre of 54-55° C., 5 parts of bleached palm oil, 6 parts of Cochin coconut oil, 1 part of cetyl alcohol, 2 of triethanolamine, 19 of 50 per cent caustic potash solution, 6 of pure white glycerine with a specific gravity of 1.23-1.24, and 27 parts of water. *Seifensieder-Ztg.* **67,** 74 (1940).

Skin Irritation by Soaps

Five per cent solutions of the sodium and potassium soaps of a number of refined oils were used in patch tests on 27 people to determine their relative irritation to the skin. For sodium soaps the order of decreasing irritant action was as follows: Castor, coconut, palm kernel, rape, cottonseed, linseed, palm, olive, raisin seed, peanut, sesame, almond, avocado, cocoa butter, soybean, beef suet, corn, and poppyseed; cod-liver oil; no reaction. Potassium soaps were irritant in the decreasing order: Castor, cottonseed, coconut, palm kernel, cocoa butter, raisin seed, avocado, linseed, cod liver, palm, peanut, olive, poppyseed, almond, beef suet, sesame, soybean, and rape; corn oil, no reaction. In general potassium soaps were more irritant than sodium soaps. Women seemed more susceptible to irritation than men. Byron E. Emery and Leroy D. Edwards. *Oil & Soap* **17,** 64-6 (1940).

Wool Fat in Soap

Crude wool fat and rosin can be incorporated into household soap by being melted with the fat stock and saponified with it. Or the two can be saponified first, salted out and then added to the soap stock. This procedure is better if the addition is to be made to semi-boiled soap. Because of its low saponification number, 120-130, and its high content of unsaponifiable matter, crude wool fat can be used in soap in only very limited amounts or it will make the soap too soft. *Seifensieder-Ztg.* **67,** 44 (1940).

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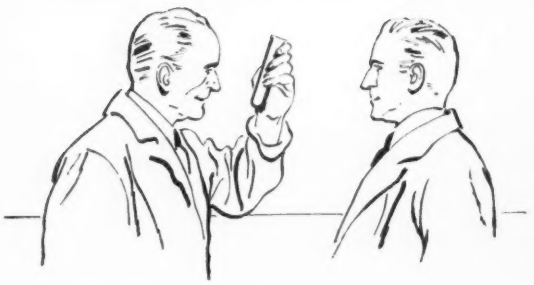

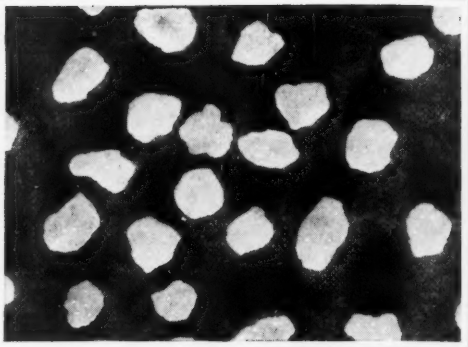

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It is a book of 270 pages, profusely illustrated, and with a very valuable bibliography of 604 titles. In the body of the book material that is pertinent from the foreign references is translated. "Pyrethrum Flowers" is an authoritative and valuable book which everyone concerned with this industry should own. Chapter headings are referred to in reviews on the opposite page.
This Pyrocide 20 advertisement, first printed in January, 1935, announces publication of "Pyrethrum Flowers" by C. B. Gnadinger, chemist of McLaughlin Gormley King Company. It was the first complete reference text containing a thorough, critical discussion of the chemical and biological aspects of pyrethrum. This book has been hailed as a "notable contribution to the chemistry and technology of pyrethrum flowers."
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Research on pyrethrum is continuous and the 1935 advertisement reprinted at left shows why McLaughlin Gormley King is continually able to make improvements.

Today Pyrocide 20 is the old reliable of the industry. Pyrocide 20 costs no more than other pyrethrum concentrates—why fuss around with products less satisfactory? During manufacture three analyses of Pyrocide 20 are made as a routine matter. The reputation of McLaughlin Gormley King, the house most experienced in producing standardized pyrethrum concentrates, stands behind every shipment. Pyrocide 20, Deodorized-Clarified contains 2.5% pyrethrins by weight (Seil Method) equivalent to 2.0 grams pyrethrins per 100 cc.

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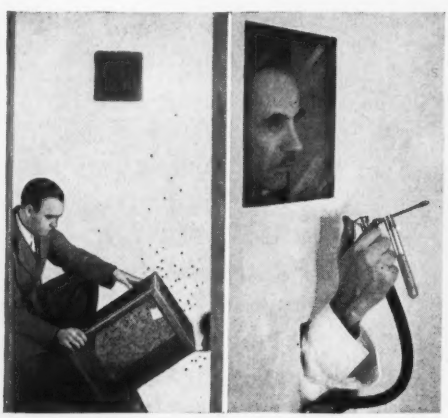
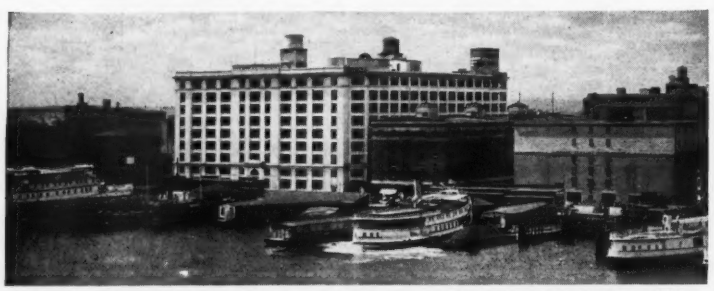
No Rule of Thumb guides the standards of effectiveness for McCormick insecticides. Every product is tested—every claim proved. For example, here is the Insectary where, with even the temperature controlled, flies are scientifically raised for actual killing tests.



Releasing Flies (left) in the "Peet Grady" Death House in the McCormick laboratories. At the right, a technician is about to release in the Death House the mist from an exactly measured quantity of a pyrethrum spray. Hours later, flies are checked numerically to ascertain by count and percentage the actual killing power of McCormick insecticides.

Finished Product ready to finish off insects! Because of their microscopic fineness, McCormick's Pyrethrum and Derris Powders contain a vastly higher number of killing particles to the ounce. Result: these particles stick more closely to insects, insuring a quicker, surer kill.



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Mr. Purcell will continue to contact that field as he has done for many years and will also offer our full line of botanical drugs.

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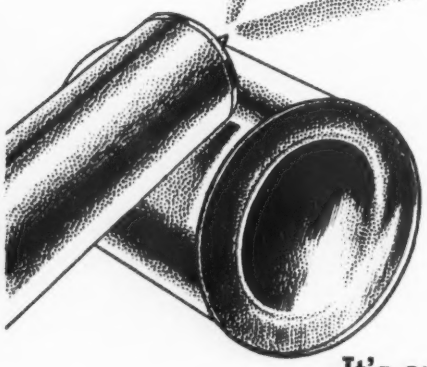

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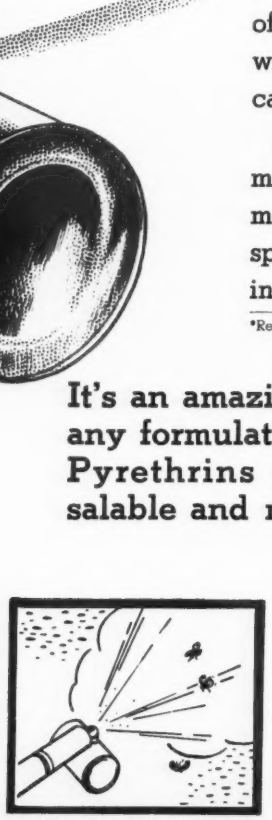

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No one can test every formula that might be good; but the specialized knowledge and experience we have gained through extensive laboratory research, enable us to offer valuable suggestions based on the formula you are now using. Why not take advantage of this? Write us today.

CRESOL—U.S.P. with very close cut distillation range and light color, for pharmaceutical purposes—Meta-Para Cresol with high meta cresol content—Resin cresols close cut to wide boiling with guaranteed meta cresol contents and clean odor.

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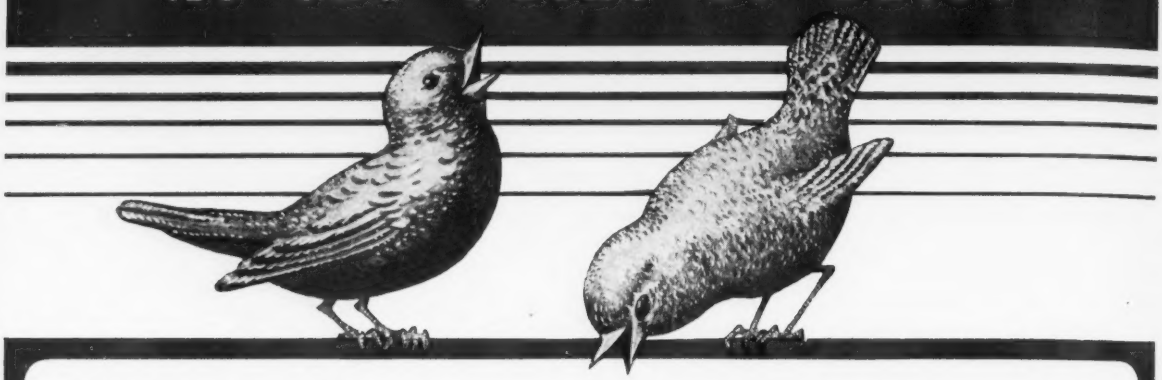

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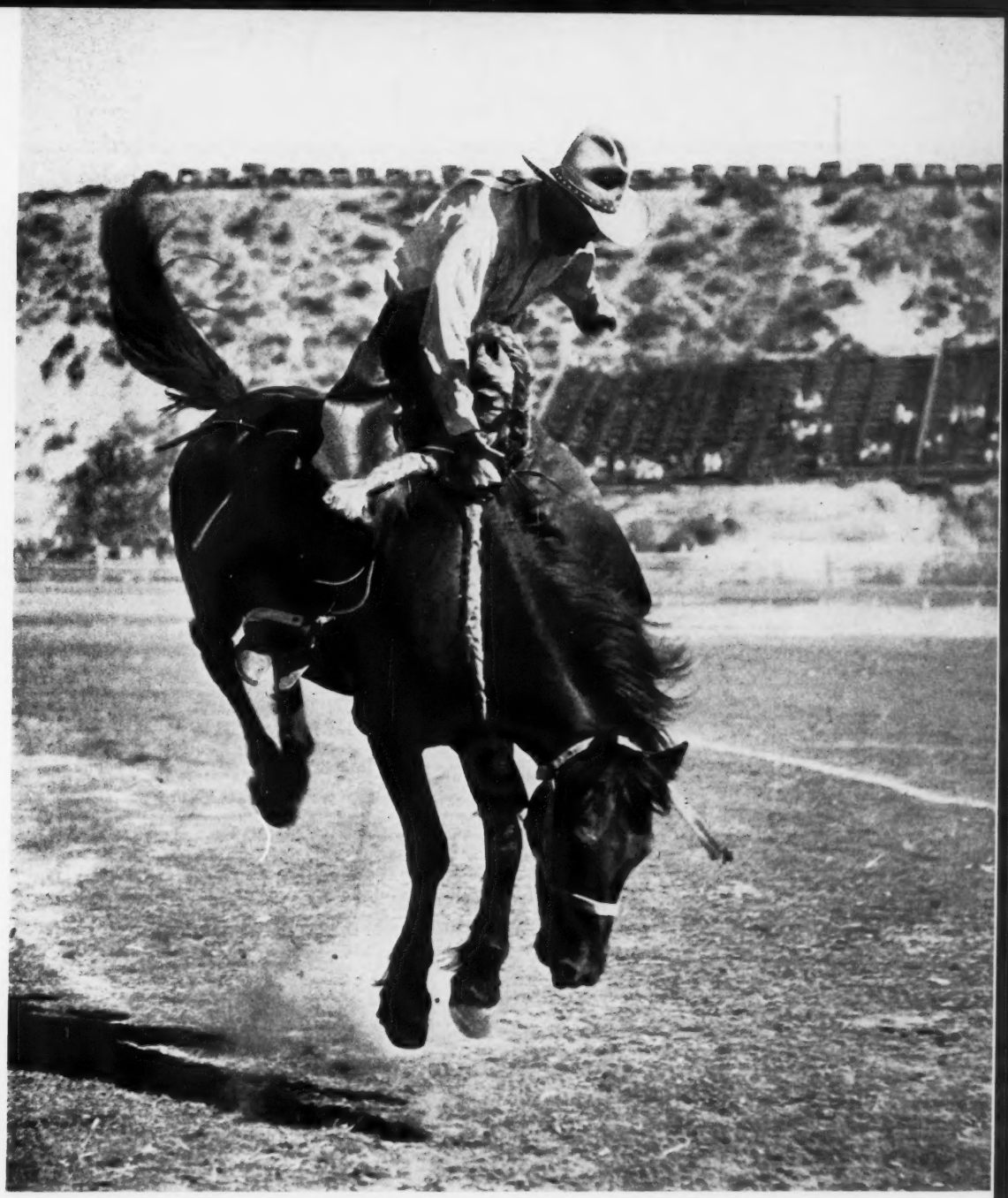

HE'S STILL ON TOP . . . SO HE MUST BE GOOD

Your insecticide must be good, too, if it is to hold its place in today's markets. We've been perfuming insecticides for so long that we have a pretty good idea of sales appeal in this field.

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HI-TOX 20

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EFFICIENT:

Hi-Tox 20 has the same killing principle as Pyrethrum and when diluted in the following proportions will give you the corresponding ratings on your insecticide spray.

4% = "B" grade
5% = "A" high grade
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Hi-Tox 20 has higher repellancy value than any of the other standard concentrates used at present.

UNIFORM:

Hi-Tox 20 is manufactured in the United States from material produced here. This material is under close chemical control consequently it is uniform at all times and the buyer is always assured of an unvaried product.

NON-TOXIC:

Hi-Tox 20 is non-toxic to warm blooded animals and will not injure any material and is completely odorless when diluted in odorless insecticide base oil.

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Hi-Tox 20 does not deteriorate with age and light or temperature have no adverse action on its killing power.

ECONOMICAL:

Hi-Tox 20 is priced right! And insecticide manufacturers who buy in quantity will be interested in our special prices on contract basis.

Further details promptly furnished

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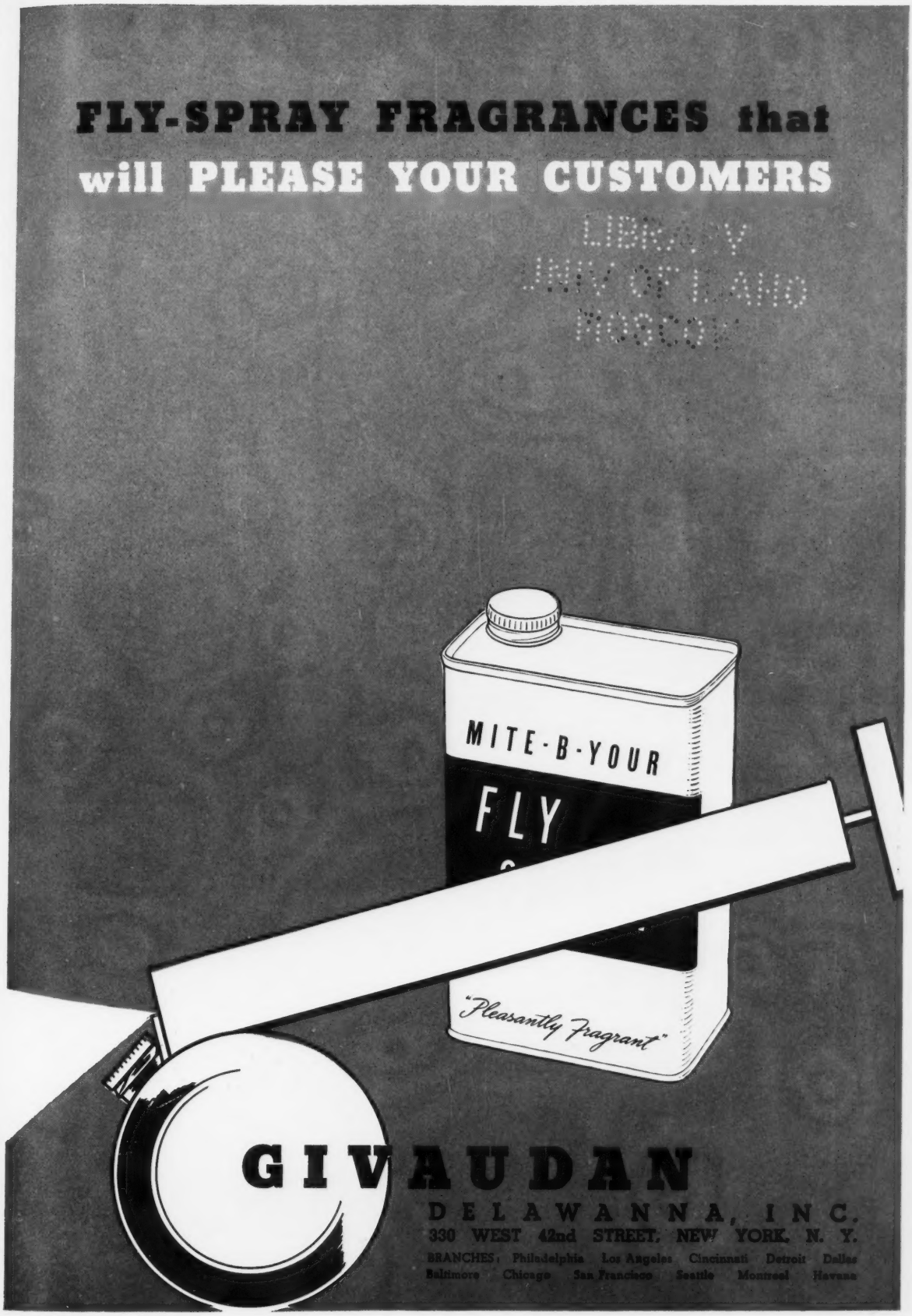

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. . . for a better convention

. . . at The Spink-Wawasee
Lake Wawasee, Indiana

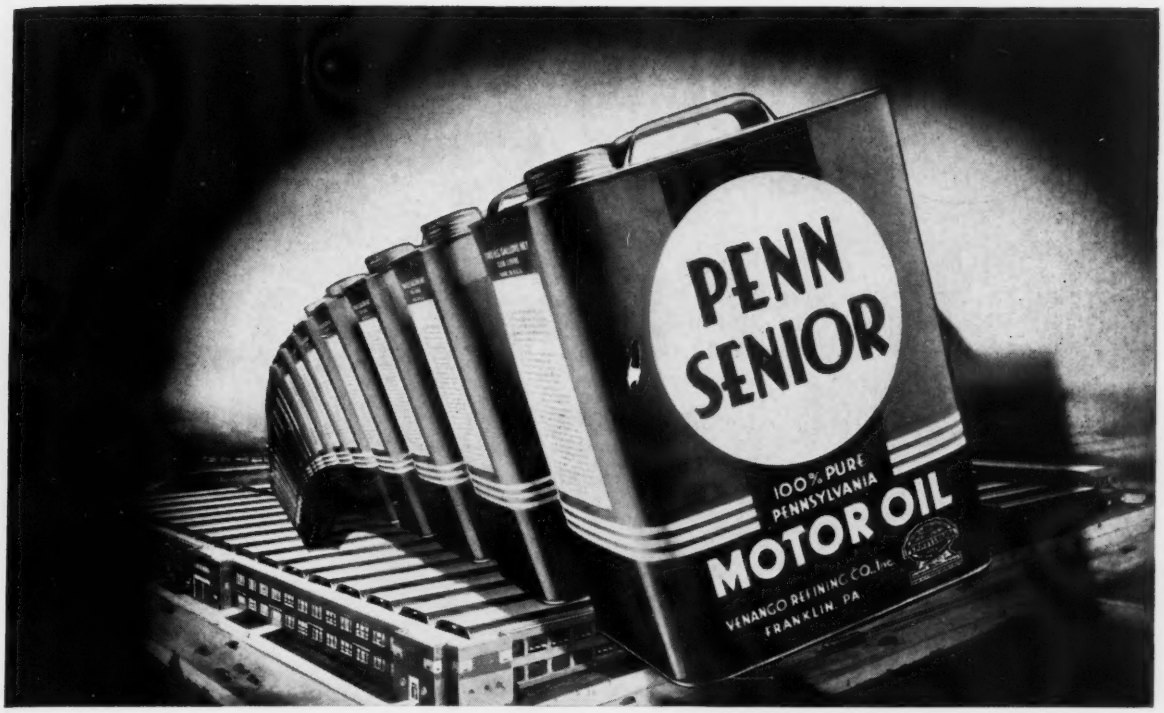
FOR a better convention, the 26th annual summer meeting of the National Association of Insecticide & Disinfectant Manufacturers will be held on June 17, 18, and 19 at The Spink-Wawasee, Lake Wawasee, Indiana.

In addition to modern meeting and hotel facilities, *The Spink-Wawasee* offers full opportunity for outdoor sports and recreation . . . a beautiful 18 hole golf course adjacent to the hotel . . . tennis courts, free to guests . . . saddle horses at reasonable rates . . . baseball diamond . . . horse-shoe courts . . . swimming . . . sail boating . . . fishing (temporary Indiana license, $1.00 . . . guides, boats, tackle, etc.)

The Spink-Wawasee bids the membership of the N.A.I.D.M. welcome to Indiana . . . and suggests that you plan now to attend and make your reservation through the office of the Association at 110 East 42nd St., New York.

The Spink-Wawasee
Lake Wawasee, Indiana

INDEPENDENT AND HELPFUL



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Decorated containers have enormous advertising value. The bright side of every can is a miniature billboard.

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Crown makes a large variety of metal cans, drums and kits. The art department is ready to serve you either in the selection of an entirely new package or in re-designing your present container.

Because of large volume production and modern plant facilities Crown is able to offer fast service and top quality workmanship at eminently fair prices.

CROWN CAN COMPANY, PHILADELPHIA, PA.

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Baird's

CERTIFIED DISINFECTANTS AND SANITARY CHEMICAL PRODUCTS

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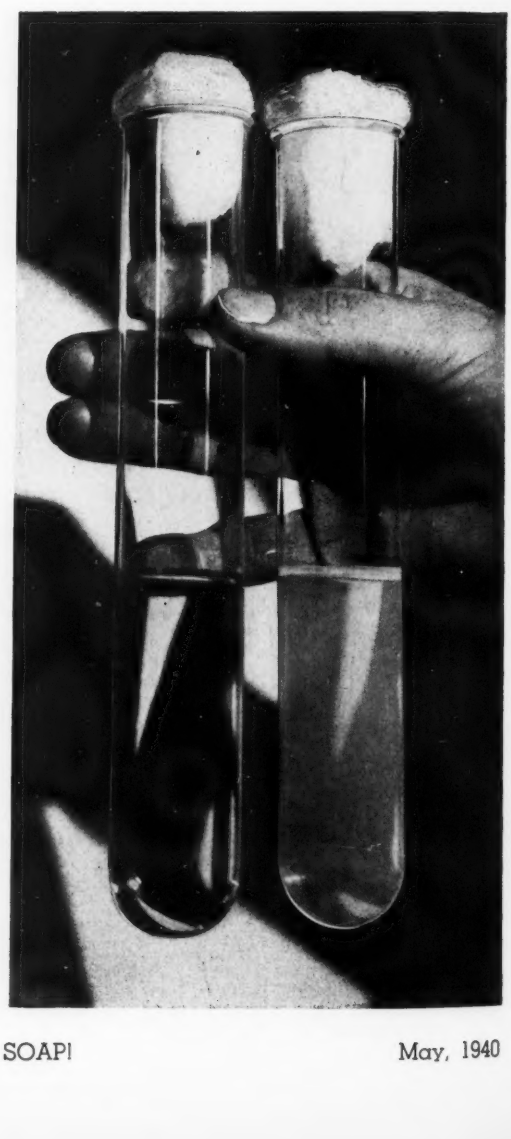


BAIRD & McGUIRE, INC.

HOLBROOK, MASS. ST. LOUIS, MO.

Sanitary Products

A Section of SOAP

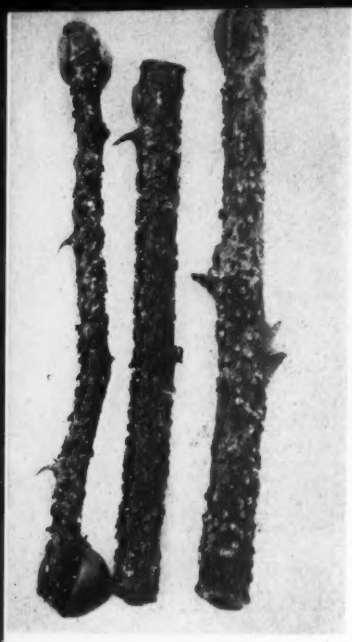
Official Publication, Nat'l. Assn. of Insecticide & Disinfectant Manufacturers

MANUFACTURERS of insecticides who have put off revising their labels for insect powder and certain other pyrethrum products, including non-oil liquids, should remember that products sold now may be picked up as improperly labeled from a retailer after next September 1 and used against the manufacturer then. In short, some packages of insecticides being shipped now will be on dealers' shelves next September and later. Consequently, current shipments should be labeled in accordance with the new regulations of the Food & Drug Administration. The fact that they were shipped before September 1 will not mean that they will be immune from Government action if picked up by an inspector after that date.

AS the matter now stands, all insecticides, disinfectants and related chemical specialties will be included under the chemical industry in determining a minimum wage according to the provisions of the Walsh-Healey Act. This latter has only to do with Government purchases, but any wage standard set up may act as a precedent in determining wage minimums later under the Wages and Hours Act, and thus eventually may affect all payrolls in the industry. Because of this, the hearing before the Public Contracts Board of the Department of Labor in Washington last month, developed several points of importance to every manufacturer of insecticides and allied products who is not, because of the nature of his main business, classified in some other field, such as petroleum, drugs, foods, or the like.

Inclusion of household insecticides, disinfectants, and chemical specialties in the same group with basic chemicals for the purpose of determining minimum wages, is unfair and obviously misclassification. Basic chemicals have a wage rate today for common labor of close to seventy cents per hour. In household insecticides, etc., the prevailing rate is not much more than half of this, as is the case in the drug and soap industries, whose operations insecticide manufacture more closely approximate than those of basic chemicals. It is on this basis that makers of household insecticides and chemical specialties are protesting against being included in the same wage group as chemicals.

COMPLAINTS about specifications for household insecticides still being used by some U. S. Government departments, continue to come in from various parts of the country. In spite of the official commercial standard for liquid insecticide, approved by the National Bureau of Standards and by the National Association, the complaints point out, many queer and faulty specifications are still being issued. That they are basically unsound and full of loop-holes is evidently ignored. That these department officials are on the whole very smug when these specifications come up for discussion, does not add to the strength of their positions. When stupidity and power go hand in hand, the solution of any problem is difficult.



Close-up view of twigs encrusted with lac, the form in which the crude resin is deposited by the insect.

SHELLAC *in Wax Polishes*

By Dr. William Howlett Gardner*

SHELLAC has long been an important ingredient of polishes of many kinds[1-3]. This is particularly true for the emulsion types which are used for automobiles, floors, leather, shoes and furniture. It is now no secret that most manufacturers of the better known brands of self-polishing waxes are using shellac today in one form or another. The continued use of large quantities of this resin in wax products might be attributed to the unusual properties of the alkali salts of the resins in lac. These resin soaps not only aid in the proper dispersion of the wax, which is highly important in the manufacture of polishes, but they also permit the finished products to spread more evenly[4] than when other resins are used for this purpose. In addition, shellac soaps prevent excessive slipperiness in the dry wax film on a floor. This slipperiness has been the curse of so many wax finishes.

Manufacturers of wax products have probably wondered what it is that distinguishes shellac from other types of resins. The answer can be found in the manner which these resins are obtained. The cultivation of lac and the study of its chemistry are interesting stories in themselves but can only be touched upon briefly here.

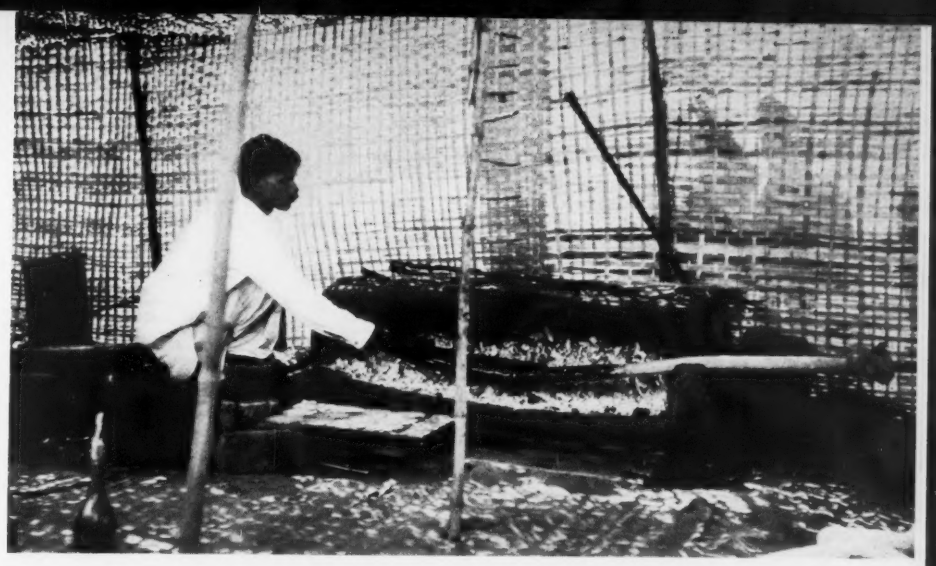
Ninety per cent of the raw lac of the world is produced within a relatively small area in India which includes the states of Bihar, and Orissa, the Central Provinces, the United Provinces, and a few adjacent areas in Bengal. Calcutta is practically the only port from which this valuable commodity is shipped. Like silk, it is an insect product which is secreted by the little tree lice to protect themselves from the weather and their enemies during their frail existence.

There are generally two generations of the lac insect during a year. The creatures start their careers as minute red larvae crawling over the trees until they find soft succulent twigs to pierce with their proboscis in order to reach the juices of the host tree. Many of us have been hosts to mosquitoes in a similar manner on a nice Summer evening. The larvae of the lac insect however, settle upon the twigs of the trees in very large numbers, often completely covering the lower surfaces and extending around and nearly covering the upper surface. The name, lac, was probably first applied to the resin they secrete because of the large number of insects covering a single branch. The word is the same as used today in India for one hundred thousand. Recent estimates suggest that, as many as 1,500,000 insects are required to produce lac for the manufacture of one pound of shellac[5].

The insects start secreting lac after a very short time, once they have attached themselves to the twigs. They first form a cell of lac about their bodies and as the secretion continues, the lac from one insect coalesces with that of the others to form a continuous thick coating over most of the twig. A pair of holes on the upper surface of the lac cell permits breathing. Wax filaments prevent these holes and the pores of the insect from becoming blocked with the soft resin.

* Research Professor of Chemical Engineering, and Supervisor of Shellac Investigations, Polytechnic Institute of Brooklyn, N. Y.

The crude sticklac is scraped off the twigs onto cloths by natives of the producing regions in India.



In narrow bags, twenty-five to thirty feet in length, the shellac is melted over a fire and the soft lac squeezed through the cloth, another step in refining the crude lac.

Different components of the lac are not secreted at the same rate[6], which would indicate that the various component substances may be synthesized in different glands in the skin of the insect. The largest portion of the resin known as "hard lac" is secreted at a steadily increasing rate, while the natural resinous plasticizer, "soft lac," and the wax are produced at much slower speeds and irregularly.

The insects devlop very rapidly upon the host tree, reaching maturity within a few weeks. The males emerge from their lac prison after about two months, and upon fertilizing several females, they die. The females never leave their cells but continue to secrete lac and become one large incubator for their young which hatch out in their abdomens. They in turn die after the young have swarmed.

The type of host tree has a marked effect upon the length of the life cycles during any one season and upon the quality of lac secreted. There are therefore four major crops of raw lac. These are known as the Katki or Rangeen crop, the Baisakhi crop, the Aghani or Kusmi crop, and the Jetwi crop. Katki and Baisakhi lacs are grown upon hosts other than the Kusum tree. The Agham and Jetwi lacs which are raised upon the Kusum are much paler in color than lac from other hosts and are used for the manufacture of the lighter shellacs. Insects whose parents were raised upon the Kusum tree also produce light colored resins, but their children secrete lac typical of their host. This method of cross-infection is one which the entomologists have recently recommended as a means for increasing the quantity of lighter colored lacs, when demand for these grades increases.

SHELLAC as the name implies is the flaked form of purified lac. In the native process, the raw lac is first stripped from the twigs, ground to the size of beet seeds, and washed with water or a dilute soda solution to free it from as many natural impurities as possible. When dried, it is placed in long sausage shaped bags and further refined by melting it and squeezing it through these bags. Care is taken not to overheat the lac during this operation.

The molten lac which adheres to the outside of the twisted bag or has fallen upon a smooth flat stone in front of the fireplace is then stretched over a porcelain hot water bottle and after warming in front of the fire drawn into a large thin sheet. This sheet cracks into the common flakes of commerce upon cooling. Large amounts of flaked lac are also

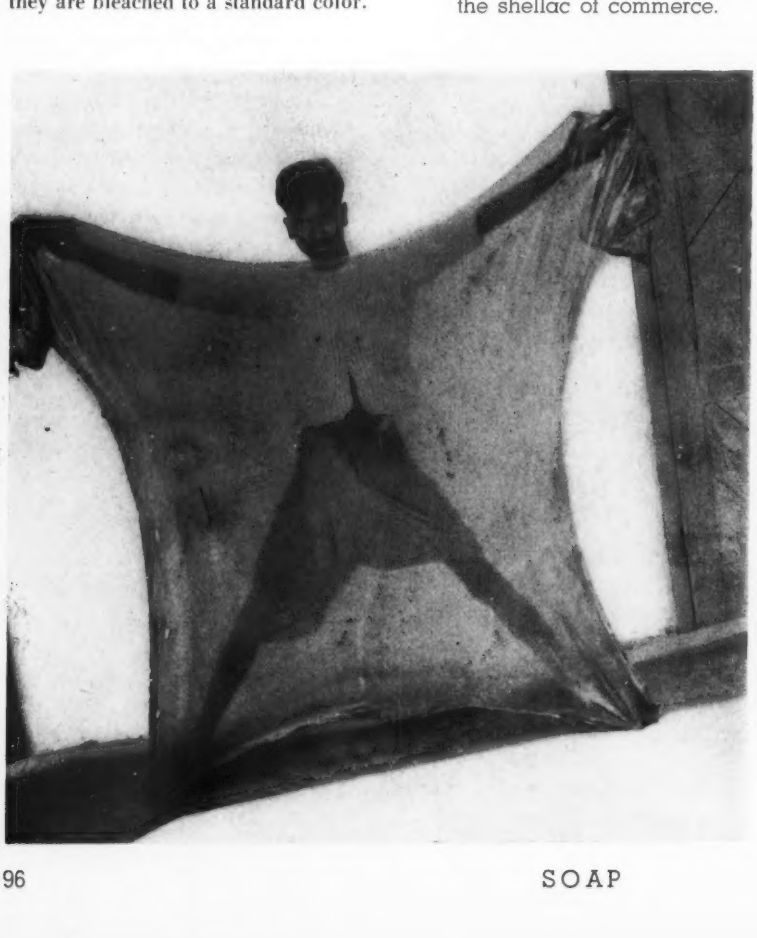
Breaking up the lac seeds, after the material has been sifted and ground, by treading the mass in large jars after thorough soaking in water. This is to remove insect pulp and other refuse prior to purification.

manufactured in India and in Germany by mechanical processes. One of these employs the same general principles of the native process, while the other processes use solutions of lac in organic solvents in order to remove the dirt and other impurities. There are several standard grades of pure shellac based upon their color and the small percentages of unremoved impurities.

Probably the most popular lacs in this country are the bleached lacs which are manufactured here. The dewaxed grade is known as "Refined Bleached Shellac" and is the one most widely used lac in wax polishes. The bleached lacs are not sold in flake form, but as powder or granules. Although not strictly shellac in the sense they are not flakes, these grades have long been called shellacs since flaked lac was used as the raw material in their manufacture. These light cream colored lacs are obtained by bleaching with sodium hypochlorite. They are made from lac which has been carefully selected for this purpose by chemical analysis, and they are bleached to a standard color. These products could justly be classified as synthetic resins, in the same manner that we are so accustomed to classify ester gums, and rosin modified phenolic resins. Freshly bleached products show no signs of mineral acids or other contaminents and only the minutest traces of mineral salts[7], which in no manner effect their use.

CHEMICAL studies show that shellacs are remarkably uniform in chemical composition[8 9], possibly even surpassing some of the synthetic resins in this respect. No single chemical formula can, however, describe the properties of lac, since it consists of a mixture of several separate yet similar compounds. These compounds are interesters of polyhydroxyacids, i. e., esters which may have been formed by the zoochemical reaction of several acids containing two or more alcohol groups[10].

A small square of heated shellac is stretched into a large, thin sheet, annealed before a fire, cooled slowly, and finally broken up into shell-like flakes, the shellac of commerce.



These compounds have very similar chemical properties to those forming the building blocks of alkyd resins, but chemists have yet to approach the architecture of molecules developed in nature's laboratory in synthesizing lac.

The plasticizer which nature has added to shellac is composed of free hydroxy-acids and simple interesters of these acids, while the shellac wax is a mixture of esters of the usual type which can be split into simple fatty alcohols and acids containing a relatively large number of carbon atoms without additional hydroxyl groups.

IT IS not surprising from our present knowledge of the chemistry of lac that it should give useful alkali soap solutions. This would be expected from the aliphatic, and the weak acidic nature of the components of lac. The relatively large number of hydroxyl groups per molecule contributes to the solubility of these high molecular weight soaps. It is possible therefore to prepare much more highly concentrated solutions of lac soaps than is possible with other natural resins, which are different in source and chemical characteristics.

The soluble lac soaps show definite wax emulsifying properties although not as marked as those of the alkali metal soaps of some of the fatty acids. All of the lac soaps have good film forming characteristics. The viscosity of their solutions increases with concentration like any varnish, but the increase in viscosity is very rapid for amounts of lac soaps in excess of two and a half pounds per gallon of water. Three to three and a half pound "cuts" of them are practically solids in most cases. Hence, preparations even of the consistency of greases can be made with them.

The properties of the films of these lac soaps naturally vary with the type of reagent used in dissolving the lac. Solutions of ammonium hydroxide, ammonium carbonate, soda ash, potash, borax, sodium silicate, sodium phosphate, morpholine, triethanolamine and sodium sulfite are used for

obtaining different types of aqueous varnishes for various purposes. Films of lac soaps from all of these solvents are more brittle when completely dry, than are those from alcoholic varnishes of the resins. This is an advantage in preparations like wax polishes, where the shellac soaps impart hardness and durability to films of the polish. Preparations containing only natural waxes and fatty acid soaps are often too soft for some purpose such as floor finishes. Films of the morpholine and ammonium soaps of lac when once dry, are less affected by water than are those of sodium or potassium soaps, and hence the former are generally preferred for making wax polishes. There is every reason to believe that the films, even those from ammonium hydroxide solutions of lac are definitely those of the soaps of lac. When baked at elevated temperatures, films of the ammonium soaps polymerize to produce water-resistant films, without apparently losing an appreciable amount of ammonia.

Aqueous varnishes of these lac soaps are employed for a wide variety of purposes besides polishes. Their uses include solutions for stiffening hats, leather dressings, photo-engraving, coating paper, laminated electrical insulation, India ink, printing inks, food and fruit glazes, distempers and adhesives. All of these products including wax polishes are made by first dissolving various types of lac in solutions of alkaline substances such as those enumerated above. However, this does not mean that the resulting lac solution need be alkaline, unless there is some particular necessity for its being so as in the case of photo-engraving solutions. Practically neutral solutions of any of the lac soaps can be obtained by selecting the correct proportion of lac to a specific alkaline salt, and using the proper technique in dissolving the resin. These neutral soap preparations are practically the same color as the original resin. Alkaline solutions of lac in comparison are wine colored. Although these aqueous varnishes do not penetrate wood or paper in the manner of spirit varnishes, they thoroughly wet all surfaces with which they come in contact. Hence when they are incorporated with wax they impart flow and leveling characteristics to the polish which are superior to those obtained with other materials.

Robertson and Wilson recommend the following formula[11] for a polish containing morpholine:

	Parts
Shellac	1.5
Morpholine	0.2
Water	15.5

The finished polish is made by adding this solution to a wax emulsion prepared from the following constituents:

	Parts
Carnauba wax	11.2
Oleic acid	2.4
Morpholine	2.2
Water	67.0

Similar preparations which give very satisfactory results are made by using aqueous ammonia or triethanolamine solutions of lac. The exact amount of lac which a particular alkaline solution will dissolve varies to a limited extent with the type of lac used and should be carefully determined for each respective lac and alkali before changing a formula in the manufacture of a wax polish.

By the incorporation of shellac, a wax polish is obtained which has a higher gloss on drying, will spread more evenly on the floor surface, is not quite as slippery, avoids streakiness in the film which is common when some other resins or gums are used, gives a more stable emulsion, and gives a harder and better-wearing film. A recommended standard composition for a non-rubbing wax was issued by the U. S. Department of Commerce in August, 1939, in its Circular C, containing shellac. The formula and procedure are given as follows:

	Parts
Carnauba wax	72
Oleic acid	9.1
Triethanolamine	10.6
Borax	5.4
Boiling water	500
Shellac	10
28% Ammonia	1.75
Room temperature water	100

1. Melt the wax, and add the Oleic acid. The temperature of the mix should be about 194° F. Placing the container in boiling water serves to keep the mix at a suitable temperature, which should never rise above 212° F.

2. Add the Triethanolamine slowly, stirring constantly. This should make a clear solution.

3. Dissolve the Borax in five cubic centimeters of boiling water, and add to mix (2). Stir about five minutes. This gives a clear, jelly-like mass.

4. Add the rest of the boiling water slowly, with constant stirring. An opaque solution should be obtained. Cool.

5. Add the 100 cubic centimeters of room-temperature water to the shellac, and then add the ammonia. Heat moderately until the shellac is in solution. Cool.

6. Add the shellac solution to the wax solution, and stir well. The resulting solution should give a clear film when applied to linoleum, mastic floors, etc.

No matter how ideal a material may be for a specific purpose, scientific research can usually find means for improving it. In consequence, the various laboratories doing research on shellac have been studying all types of new resins (12) which can be produced from this natural product. Many of these new resins have very interesting properties and several will undoubtedly find extensive use in the future in other polishes.

Many of these modified lacs are soluble in solvents which do not dissolve shellac, such as petroleum naphthas. Some are soluble in water without the aid of alkalies (13). Others are soluble in weak acid solutions. A few apparently give soap solutions of unusual emulsifying properties. One in particular appears to be fully compatible with mineral waxes (14). These are but a few examples of the many types of resins which have been synthesized from lac. Obviously with such a wide choice of new materials, it will be some time before many of

(*Turn to Page* 113)

MORIBUND FLIES . . .

Where do they figure in counting "deads" under the Peet-Grady Procedure?

THE following question was posed and discussed at the last annual meeting of the National Association of the Insecticide & Disinfectant Manufacturers at Washington, D. C., in December, 1939.—"Shall moribund flies be counted as dead in the Peet-Grady Test?" The question was discussed principally in meetings of the Insecticide Scientific Committee, and was reported in the affirmative for consideration of the Association membership as a whole. No further action was taken, and the matter is now in the hands of the new committee to await further investigations and research. A. E. Badertscher of McCormick & Co. is chairman of the 1940 committee.

The 1939 committee was headed by Dr. Alfred Weed of John Powell & Co., who reported as chairman. Other members of the committee also submitted reports, including L. D. Benedict of the Midway Chemical Co.; Dr. W. A. Simanton of Gulf Research & Development Co.; and Dr. H. E. Whitmire of Whitmire Research Laboratories. (Inasmuch as the comments of Dr. Whitmire were essentially the same as those published by him under "Test Methods for Recording Moribund Kill" in the November, 1939, issue of *Soap & Sanitary Chemicals*, they are not given here.) The other reports follow.

By Dr. Alfred Weed

SINCE essentially this brief paper is being offered in summarizing work done by the Insecticide Scientific Committee to open this morning's discussion, these remarks can be largely confined to a review of the collaborative work of the Committee.

The word "moribund" often defined as "dying" or "at the point of death" is a term which has been used for several years in entomological literature. It appears rather frequently in English studies where its use is associated with the reporting of insecticide tests when at the time counts have been made for the calculating of mortality figures, insects were present which showed the effects of the treatment but were neither dead nor were they alive in the sense of being normal.

The question of an allowance for "moribund" flies in calculating Peet-Grady results and the subsequent grading of sprays was proposed before your present Chairman's appointment but not until at our Committee meeting of last June was definite action taken, as a result of which, the Board of Governors asked the Committee to make a series of comparisons dealing with moribund flies and their counting together with its recommendations.

At our June meeting, the Committee adopted a definition for what constituted "moribund" to be used in counting the flies in these tests as:—we defined "moribund" flies as "flies which could not walk or fly." It was stated at this meeting that the abundance of moribund flies might be expected to vary, dependent upon spray composition; roughly, between 5 and 20 per cent of the total number of insects used at the time the 24 hour kill count was made providing of course the spray contained a toxic that induced this "moribund" condition and to signify in the following remarks the presence of such a material, the writer refers to such toxics as "moribund factors." In terms of numbers or percentages the results reported for the number of "moribund" flies lie roughly within this 5 to 20 per cent range but that some discrepancy must exist in these counts for "moribund" flies is obvious, since in the different laboratories the number of "moribund" flies by the above definition varies as much as 600 per cent on the same sample.

For these tests, three commercial insecticides were used in conjunction with the Official Test Insecticide. One of these was a Pyrethrum spray; the second a mixture of Pyrethrum and a "moribund factor" and the third a mixture of a thiocyanate and a "moribund factor." These sprays were obtained from their manufacturers and submitted to the Committee for these comparative tests.

The data has not been treated statistically in any manner and several of the collaborators have simply reported their summaries covering the tests.

It can be concluded from these results:

1. Including the "moribund" flies with those dead at the 24 hour count, or counting the dead flies at 48 hours will grade at much higher levels those sprays containing a "moribund factor."
2. If any change is to be made in arriving at the grade designation of a spray the kill in 48 hours shows greater acuracy than the inclusion at the end of 24 hours of those flies which are "moribund."
3. As there now exists no figure for the per cent of knockdown in ten

LABORATORY	No. of Tests	No. of Flies Used	O. T. I.				I				II				III			
Type of Fly and Test			% KILL IN		% MORIBUND		O.T.I. KILL Difference In		% MORIBUND		O.T.I. KILL Difference In		% MORIBUND		O.T.I. KILL Difference In		% MORIBUND	
			24 hrs.	48 hrs.	24 hrs.	48 hrs.	24 hrs.	48 hrs.	24 hrs.	48 hrs.	24 hrs.	48 hrs.	24 hrs.	48 hrs.	24 hrs.	48 hrs.	24 hrs.	48 hrs.
1																		
Lab. Small Group ..... (closed cage)	40	4,507	33	33	0	0	+ 21	+ 24	0	0	+ 17	+ 41	27	10	+ 21	+ 48	25	8
1																		
Lab. Small Group ..... (open cage)	40	4,170	40	—	0	—	+ 25	—	0	—	+ 14	—	11	0	+ 23	—	8	—
2																		
Wild. Large Group	16	8,659	52	55	1	0	+ 25	+ 23	0	1	+ 17	+ 33	20	7	+ 28	+ 39	15	3
3																		
Lab. Large Group	16	9,343	47.5	48.1	0	0.13	+ 19.3	19.2	0	0.21	+ 27.3	39.2	4.8	2.45	+ 42.1	48.1	4.2	1.35
4																		
Lab. Small Group	40	3,910	52	—	2.7	—	+ 21	—	3.7	—	+ 19	—	13	—	+ 26	—	10	—
5																		
Lab. Large Group	25	14,075	45.1	48.4	0	0	+ 22.9	+ 21.6	0	0	+ 13.9	+ 41.8	7.2	0.4	+ 41.8	+ 42.2	3.8	0.7
6																		
Lab. Large Group	16	8,157	22.9	23.8	0	—	+ 33.6	+ 34.6	3.0	—	+ 39.9	+ 49.2	7.0	—	+ 49.5	+ 56.9	6.8	—
7																		
Lab. Small Group	80	*8,000	51.9	—	—	—	+ 32.2	—	0	0	+ 29.6	+ 37.8	10.6	1.0	+ 36.1	+ 42.9	7.2	0.2

LABORATORY	No. of Tests	No. of Flies Used	O. T. I.	I	II	III
Type of Fly and Test			% Knock-down in 10 minutes	% Knock-down in 10 minutes	% Knock-down in 10 minutes	% Knock-down in 10 minutes
1						
Lab. Small Group ..... (closed cage)	40	4,507	100	100	100	100
1						
Lab. Small Group ..... (open cage)	40	4,170	100	100	100	100
2						
Wild. Large Group	16	8,659	99.2	99.6	99.2	99.9
3						
Lab. Large Group	16	9,343	95.2	96.8	95.0	99.8
4						
Lab. Small Group	40	3,910	96	98	98	99
5						
Lab. Large Group	25	14,075	97.4	98	98.1	96.8
6						
Lab. Large Group	16	8,157	92.2	97.4	96.8	98.2
7						
Lab. Small Group	80	*8,000	—	—	—	—

* Number of flies by estimate.

minutes in the existing specifications, other than that a product be equal to the OTI, a change in the grading to either include the "moribund" flies with the dead at 24 hours or to extend the count for kill to 48 hours will permit: (a) a spray not necessarily giving adequate rapidity of knockdown to grade up well and (b) a spray below "B" grade qualifications at 24 hours may be an "AA" spray on the basis of such a change.

4. The possible existence of a compound or compounds yielding high figures for dead and "moribund" at 24 hours but with which many of the "moribund" flies recover during the second 24 hour period would negate, counting the dead and "moribund" at 24 hours and necessitate the count for kill at the 48 hour interval.

You manufacturers and marketers of insecticide will necessarily have to give thought to the following questions:

1. What are the essential properties possessed by your product that are responsible for its sale?
2. Has the quality of your product, in terms of the existing grade designations determined by the Peet-Grady procedure as it now stands, given you satisfaction?
3. Is a higher final kill for your product an important factor?

In considering any change which would modify the present method used in establishing grades to give credit to sprays containing a "moribund factor" for the additional mortality which they yield between 24 and 48 hours after spraying you have the following alternatives to consider:

(1)—adding the "moribund" flies at the 24 hours to the dead flies at 24 hours to the subsequent usage of this combined value in determining the grade designation. However, the collaborative data fails to support this proposal.

(2)—the use of cages designed to permit the escape of normal flies and those not too severely affected and the consideration of all flies unable to escape from

U.S.I. ALCOHOL NEWS

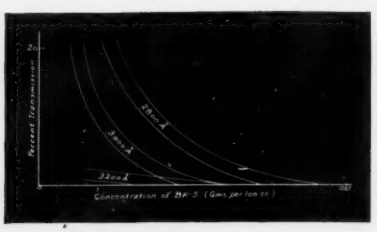
May ★ A Monthly Review of Technical Developments for Chemists and Executives ★ 1940

NEW CHEMICAL FOR SUNTAN LOTIONS

Sunton lotions with the sales-building features of good protection against sunburn and freedom from oil and grease can be formulated with the aid of U.S.I.'s new chemical light-screen.

U.S.I. Develops Light-Screen That Gives High Degree of Protection

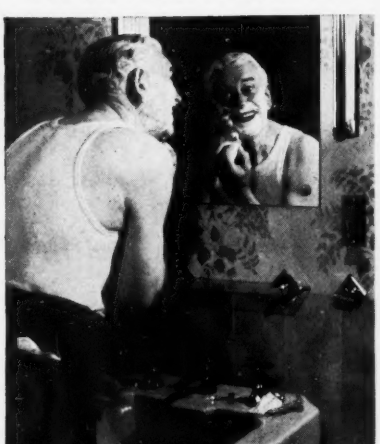
Remarkable light-screening power in extremely low concentrations is promised by a new U.S.I. product, Butyl-Benzal-Acetone-Oxalate (BK-5). Incorporation of a fraction of a per cent in skin lotion formulas gives excellent sunburn protection and retains the physical characteristics of the skin lotion. Butyl-Benzal-Acetone-Oxalate offers excellent opportunities to formulate suntan lotions that are free from oil and grease, leave no objectionable deposit on the skin. Curve shows effect of this new chemical in very small concentrations. ¼ of 1% screens out all light up to 4,400 Angstrom units.



Low concentrations have high screening power.

A straw-yellow solid, Butyl-Benzal-Acetone-Oxalate is adequately soluble in all the solvents commonly used in skin lotions.

SHAVING SOAP HEALS CUTS



New shaving soap uses lipoid soluble substances from soy beans as styptic agent, according to recent patent. Active components of the beans are dissolved in ether and precipitated with acetone. (Ether and Acetone are produced by U.S.I.)

PURE ALCOHOL FOR DRUGGISTS

Pharmacists get more accurate results in drug percolation by relying on the full strength, low acidity, and freedom from toxic impurities of U.S.I. Pure Alcohol. It complies with U.S.P. XI and N.F. VI standards. In addition, it receives further checks against U.S.I.'s own extremely rigid standards—developed through years of experience.

TECHNICAL DEVELOPMENTS

For further information write U.S.I.

Jasmine absolute can be replaced with a new substitute that gives a true reproduction, it is claimed. **(No. 330a)**

An orris-violet type of base can be used in extracts, toilet waters, powders, and soap compositions, according to the manufacturer. **(No. 331a)**

A new detergent is described as a water-soluble, oily liquid which contains no free fatty acids or soap. **(No. 332a)**

A disinfectant base is said to be a mixture of methyl, ethyl, and isopropyl cresols. **(No. 333a)**

Label printing can be carried out directly on the surface of ampoules, vials, and small round bottles with the aid of a new machine, it is claimed. **(No. 334a)**

A capping machine automatically feeds, sterilizes, and applies metal caps on glass containers, with vacuum from 2 to 28 inches. Machine is available on annual rental basis. **(No. 335a)**

U.S.I. INDUSTRIAL CHEMICALS, INC.

60 EAST 42ND ST., NEW YORK (USI) BRANCHES IN ALL PRINCIPAL CITIES

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such cages as dead. Cages such as used by Stanco and reported on by H. E. Whitmire would fall in this classification. Data the Committee has on "closed—versus—open" cages does not show similarity in results between the sprays containing a "moribund factor"; that is, dead or "moribund" in 24 hours in open-top cages gave results which are not like the combination of the dead and "moribund" in 24 hours counted in closed cages.

(3)—counting of the dead flies only at 48 hours and the use of this value in the determination of the grade. The objections to this practice is the need for more cages as laboratory equipment.

(4)—the possibility of omitting the time at which the count is made permitting a laboratory to report on the basis of kill at either 24 or 48 hours. The objection to this suggestion appears to the writer to be in the fact that the buyer accepts the grade designation without consideration of the time basis at which it is calculated.

(5)—to offset the possibility of low knockdown and unsatisfactory performance in 24 hours, the specifications might be modified to call for a 95 per cent knockdown in ten minutes; the value equivalent to a "B" grade rating at the end of 24 hours, with the determination of the actual grade of the product based on the mortality at 48 hours.

(6)—let the grades as now determined be continued in effect.

By L. D. Benedict

MOST of us in the insecticide business are interested in the manufacture and sale of a practical fly spray. I feel that a practical fly spray must be a controlled product and to control a product, we must have methods of doing it and definite standards to which to hold our product. I also believe, if we can produce a fly spray with a 100 per cent knockdown at the end of 10 minutes and a plus 30 per cent kill and a plus 10 per cent moribund at the end of 24 hours, or a total kill and moribund of plus 40 per cent, that we will obtain better consumer acceptance than a fly spray that is producing a 100 per cent knockdown and a plus 35 per cent kill and no moribund at the end of 24 hours.

Our research department gives me the information that at the end of 72 hours, practically all flies that have been affected by a rotenone-bearing spray will die, provided the rotenone content of said spray will run a minimum of 50 mg. of rotenone per 100 cc.

It is further generally recognized that these moribund flies are in two, more or less, distinct classes.

1. Flies that are paralyzed to the extent they cannot walk or fly, and

2. Those that can walk or fly with difficulty.

At this point, I would like to point out that I do not advocate the counting of a moribund fly of the second class because, as stated before, we are working for a practical fly spray and feel that the consumer, if he sees a fly walk or fly even with difficulty, will be inclined to consider that fly alive. However, we feel that flies that do not have the power of locomotion, even though they are capable of moving their feet and wings, should be classed as dead flies.

In the past, for the purpose of the Peet-Grady test, the Association has classified flies as normal and dead; and up until recently, most of us in the Association were willing to permit these classifications to stand because fly sprays manufactured with pyrethrum as the major insecticidal principle would permit the Peet-Grady results to fall very clearly within these classifications. However, with the introduction into the trade of other insecticidal principles, we find ourselves confronted with the practical question as to just what behavior of the fly one can permit, after spraying, and still consider the fly spray of practical value. I shall relate our experience and hope that other laboratories in the association can concur.

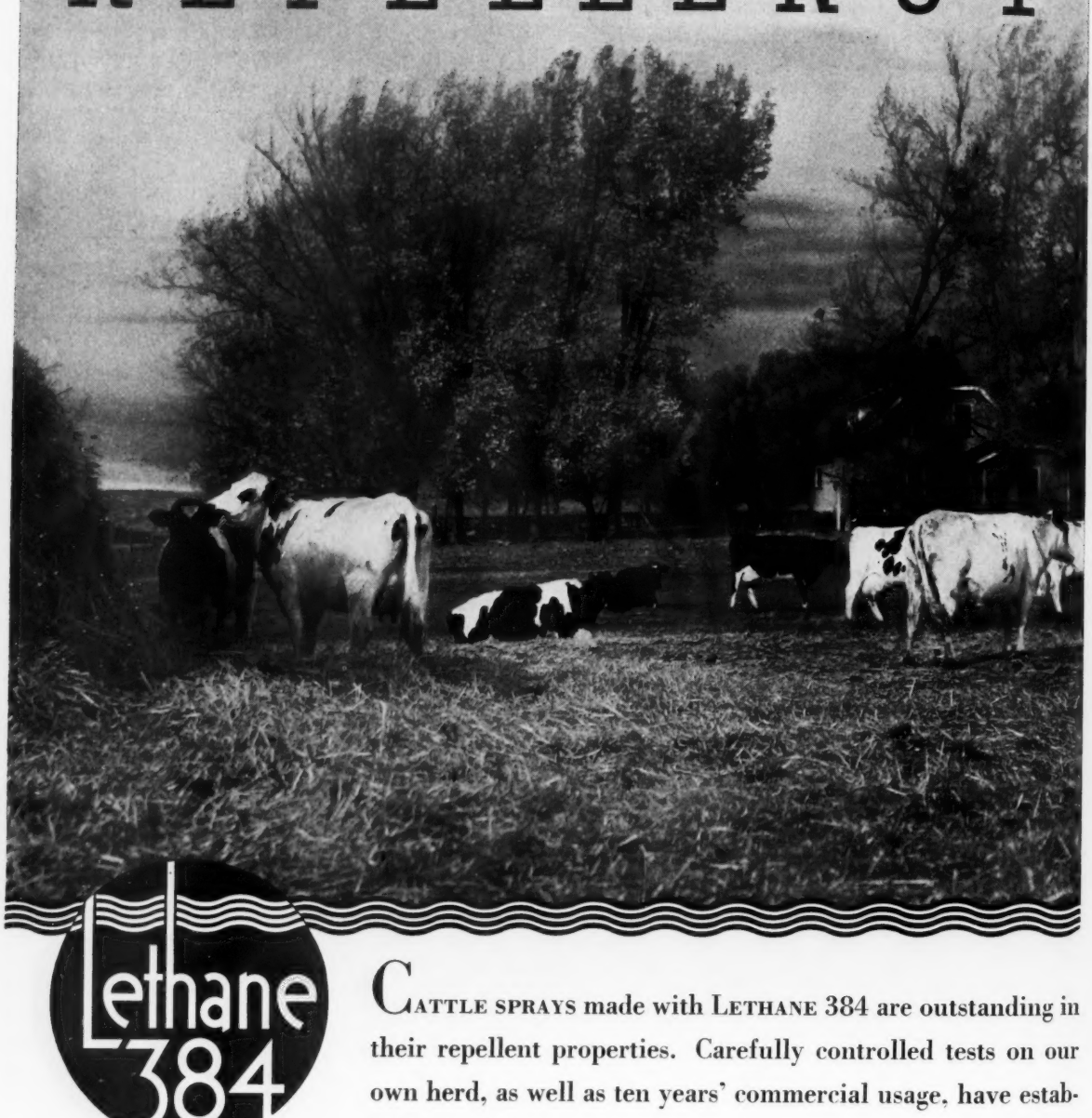
1. We find that moribund flies will lay eggs. We also find that if these eggs are put into a proper medium, they will hatch and produce flies that in turn are able to reproduce. But it occurred to us that this was not the condition under which the moribund fly laid its eggs, so we ran a series of tests covering over 300,000 eggs that we knew to be fertile eggs and out of these 300,000 eggs not a single one of these eggs hatched, after two hours of exposure to conditions similar to that which a moribund fly would lay eggs.

2. In a series of experiments to determine just how long fly eggs could lay out in the open and remain fertile, we found that fertile fly eggs, when allowed to lay on a hard dry surface or on a dry cloth or carpet surface, at a temperature of 80° F. and humidity of 70 for between 1½ and 2 hours after the eggs were deposited, became sterile.

Many people were questioned as to their opinion on the question of moribund flies by putting the questions in terms that the average person could understand. With one exception the answer was that flies that could walk or fly was a live fly, even though that fly made its movements with difficulty. Also with one exception, we got the answer that flies that could not walk or fly were the same as dead flies.

I would also like to point out, at this time, that the question of counting moribund flies from the data at hand does not appear to get the various laboratories into trouble. One would expect that the counting of moribund flies, which is more or less new to the various laboratories of the association, would produce quite a variation. However, it is interesting to note from the figures of six laboratories collaborating on the three samples sent out by the association, that this was not the case. The sample of *gulf* varied 13 per cent on the kill at the end of 24 hours, and 13 per cent on the dead and moribund at the end of 24 hours. On the five laboratories reporting on *flit*, we find a variation of 13 per cent on the dead at the end of 24 hours and 12 per cent on the

REPELLENCY



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CATTLE SPRAYS made with LETHANE 384 are outstanding in their repellent properties. Carefully controlled tests on our own herd, as well as ten years' commercial usage, have established this fact.

Be sure your spray has repellent power as well as killing power—use LETHANE 384.

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dead and moribund. On *flyded* we find a difference of 21 per cent between six laboratories on the kill and 10 per cent difference on the dead and moribund. From these figures, I draw the conclusion that even with the incomplete instructions we have at the present time for the counting of moribund flies, that the moribund and dead figure is more accurate than the kill figure as previously used.

Further, from a sales standpoint, we believe that the consumer is interested in a fly spray that has a quick knockdown and a high kill, which includes moribund flies of the first classification. Our scientific research proves the consumer to be correct in that the moribund fly does not reproduce and that the moribund fly of the first classification, that is one that cannot walk or fly, is, from all practical standpoints, dead, as he never revives.

By Dr. W. A. Simanton

IN THE present official Peet-Grady Method for evaluating fly sprays in accordance with Commercial Standard CS72-38, only the insects killed within 24 hours after application of the spray are considered in establishing a grade designation. Flies that are affected by the insecticide at the 24-hour count, but are still alive, are recorded with the unaffected flies for grading purposes. The presence of affected or moribund flies in addition to those killed is a well-known characteristic of sprays containing rotenone and related insecticidal agents. Certain combinations of other insecticidal materials sometimes show a similar action to a lesser extent. Opinion among interested parties is divided over the question of whether or not moribund flies should be included with dead flies in calculating the insecticidal rating by the Peet-Grady procedure. This report offers some points to be considered concerning the counting of moribund flies.

One might logically wonder why one insecticide always produces both dead and moribund flies at 24 hours, whereas other insecticides result in only dead or totally recovered flies. The explanation of this situation involves the inherent action of the material used; for example, flies sprayed with pyrethrum are moribund at six hours after spraying, but the action is practically completed at the 12-hour interval, at which time substantially all of the insects are either completely recovered or dead. With a commonly-used thiocyanate spray, many moribund flies may be observed up to 16 hours after spraying, although at 20 hours the action is quite complete. Hence, with these two quick acting materials, affected live flies are not usually observed when the regular 24-hour count is made. Test results with rotenone-type sprays show a certain proportion of dead flies at 24 hours, with most of the remaining insects being somewhat affected by the spray. Of these alive but affected insects, many will die within 48 hours, and nearly all will die within three days after spraying. Some of the flies that die within the 24- to 48-hour period are incapable of locomotion and oviposition, while others in this group are very active and are capable of laying viable eggs. Undoubtedly, the truly moribund flies which have no powers of locomotion or reproduction at the 24-hour count may be considered dead for all practical purposes. If it is desirable to include these moribund flies with the dead insects for the purpose of grading insecticides, then the various laboratories should be in agreement as to the manner and accuracy in which the number of moribund insects is determined.

In the tests recently carried on by the Insecticide Scientific Committee to study the counting of moribund flies, it was found that the various laboratories reported roughly from 5 to 25 per cent of the live flies as being truly moribund. Thus, any ratings given an insecticide having a delayed killing action may be quite variable if the numbers of dead and moribund flies at 24 hours is the basis for the rating. Furthermore, there was found to be little constancy in the ratio of dead flies to moribund as recorded by the several laboratories. Apparently for unknown reasons the action of the same rotenone insecticide may be quite different in different laboratories with respect to the relative proportions of dead, moribund, affected, and live insects at 24 hours. The variability obtained was to be expected since one of the contributing errors involves the personal judgment of the operator in distinguishing between degrees of moribundity. For actual routine testing it does not seem practical to attempt a separation of flies into four classes of vitality by manual means, because the work necessary to count eight cages would require one man's time for at least half a day.

Some laboratories have tried to obtain a separation of dead, moribund, and affected but active flies by allowing the insects to use their own powers of locomotion to escape from a container or counting board. Such a procedure helps to remove personal errors, but it does entail some alterations and additions to the present testing equipment as has been pointed out in other papers. Because of narrow differences of vitality that would cause one fly to remain in the recovery cage while another escaped, it is likely that the number of moribund flies remaining with the dead insects would be quite variable if opinions may be based on the performance of rotenone sprays in different laboratories as shown by the Committee's tests. If truly moribund flies are to be counted, one should not lose sight of the possibility that other toxic agents may enter the market that do not have the same kind of delayed action as rotenone, i.e., materials that produce a large proportion of affected flies at 24 hours, but with such affected flies tending to recover at 48 hours rather than die as is the case with rotenone sprays. Such materials are known to exist at the present time, although they have not been used commercially.

An alternative for counting the dead and moribund at 24 hours, should some provision for taking moribund flies into consideration in grading the insecticide be desired, is to count only the dead insects at 48 hours. This would eliminate inaccu-

(*Turn to Page* 117)

"Dad, why do you like the Combination TL Cleaning and Filling Machine?"

"Son, because it cleans and fills the bottles in a single operation, doing the job so perfectly that I never have to worry."

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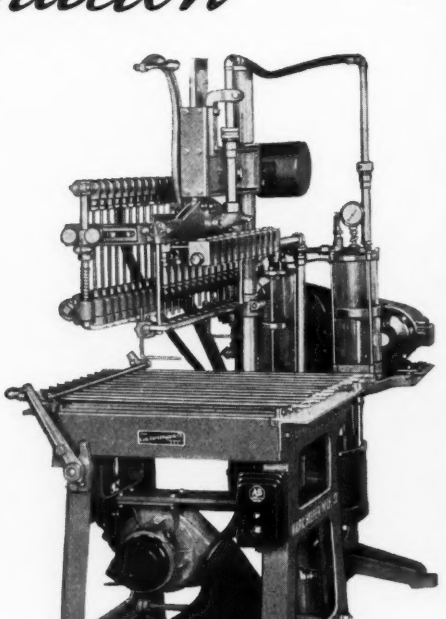
In one operation, bottles . . . cleaned . . . filled! And it's all so quick, so smooth, so thorough that production figures will always meet with complete approval of everybody in the plant.

Filtered compressed air removes all dirt from one entire row of bottles while the filling of another row is done to hairline accuracy without a drop of drip. They are then discharged upon belt conveyor.



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LABEL TABOOS

of the Federal Trade Commission

By Nathan R. Abelson

FROM the activities of the Federal Trade Commission in the past, the manufacturer of cleaning preparations, disinfectants, insecticides, soaps, and the like can secure a good idea of the claims and statements in advertising or on labels upon which the Commission frowns. Some recent citations and stipulations have been analyzed with a view to indicating specifically various statements to which the F.T.C. objects. Other manufacturers who may be making identical claims or contemplating making them, may be guided accordingly.

Under the broadened powers of the Federal Trade Commission, particularly under the Wheeler-Lea Act, the activities of the Commission continue to expand. Leading manufacturers, large and small, have been cited, including makers of some of the best known products on the American market. Claims which have been unquestioned for many years have been the subjects of recent complaints, and the list begins to read like a who's-who of American industry. Some statements to which the Commission objects are brought out in the following examples.

Deodorant and Germicide

To cease representing that the product

. . . will banish odors.

. . . put an end to unsanitary odors.

. . . purify or make safe the "hidden trap."

. . . will kill germs.

To cease representing that

. . . the use of the product is the only method by which a toilet bowl or trap can be cleaned.

. . . toilet odors are a "danger sign."

. . . the toilet bowl or trap cannot be cleaned by rubbing or scrubbing.

(*The Hygenic Products Co., "Sani-Flush," Stipulation No.* 02196)

* * * *

Insecticide

To cease representing that the product

. . . is 30 times as powerful as arsenate of lead for stomach poison for insects or that it is 15 times as powerful as nicotine for sucking insects.

. . . kills, controls or combats bugs, insects and worms.

. . . is recognized by the U. S. Department of Agriculture as the most powerful insecticide yet discovered or that it is a "new discovery" or "brand new."

. . . will stop, prevent, or cure all types of fungous growth, mildew, blight, leaf spot or diseases of plants.

. . . is effective for a long period of time or any period of time.

. . . is effective against the following insects: blister beetle, plant lice, cabbage bug, tomato horn worm, sweet potato beetle, leaf hoppers, web worm, diamond black moths, melon lice, squash vine borer, pinch beetle, 8-spotted forester, corn earworm forest worms, climbing cut worms, army worms, grass hoppers, squash bugs, worms which infest grape vines.

(*Henry Field Seed Co., "Bug Dust," Stipulation No.* 02200)

* * * *

. . . is a double strength insecticide.

. . . will prevent or eliminate infestation in foodstuffs and in places where foodstuffs are kept and stored.

. . . will keep bugs and insects away from foodstuffs and places where foodstuffs are kept and stored.

(*Midland Chemical Lab., Inc., "Mill-O-Cide", Stipulation No.* 02455)

* * * *

. . . kills flies, mosquitoes, fleas and moths "instantly."

. . . contains no kerosene, unless or until it is manufactured without kerosene as an ingredient.

. . . is the only nationally known spray at popular prices.

. . . is one-half the price of other sprays.

. . . kills any but sweet-eating ants.

. . . is effective against cut worms.

. . . will not taint milk.

(*Midway Chemical Co., "Fly-Ded", "Garden Spray", "Xodor", "Swish Stock Spray", "Ant-Ded", "Ant Flowers"; Stipulation No.* 02301)

* * * *

Cleaning Fluid

To cease representing that the product

. . . will not burn, or is non-inflammable.

. . . cannot explode.

. . . leaves no rings, wave marks or spots.

. . . is used in every home or is the only cleaner of its type obtainable at a moderate cost.

. . . will remove all stains regardless of their cause.

(*Midway Chemical Co., "De Luxe Cleaning Fluid", Stipulation No.* 02301)

* * * *

To cease

. . . use of the word "Sanitizes" implying that the product is effective as a germicide or an antiseptic.

(*Vapoo Products Co., Inc., "Vapoo", Stipulation No.* 2572)

* * * *

To cease representing that

. . . any mixture of the product and

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ESTABLISHED IN 1798

PYRESSENOL #20 ODORLESS

* * * *

FOR ODORLESS HOUSEHOLD INSECTICIDES
Better than Pyrethrum—Cheaper than Pyrethrum

* * * *

Comparison with Pyrethrum Extract No. 20 Odorless

1. **Lower cost**
2. **Higher kill at the same dilutions**
3. **Equally rapid and complete knockdown**
4. **Significantly greater effectiveness against roaches—quicker knockdown—higher kill**
5. **Equally safe and pleasant to use—equally free from toxicity or irritation to users**
6. **Less odor—less color—unusually free from any danger of staining**

* * * *

Since Pyressenol No. 20 Odorless combines lower cost with greater effectiveness, it permits the manufacture of thoroughly effective, safe, and pleasing household sprays within reasonable cost limits.

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BOSTON : CHICAGO : PHILADELPHIA ST. LOUIS : LOS ANGELES

Plant and Laboratories . . . Bayonne, N. J.

water is the equivalent in chlorine concentration to Dakin's Solution.

(*The John Puhl Prod., Co., "Fleecy White", Stipulation No.* 02435)

* * * *

Lye

To cease representing that the product

. . . is "unequalled" as a drain pipe opener, for cleaning garbage pails, soap-making, disinfecting, or "is the highest test lye possible for trained chemists to produce."

. . . is "kind to your hands" and/or "safe for the most delicate fabrics."

. . . can "always" be relied upon for satisfactory results.

. . . kills germs.

. . . makes milking machines germ-free, or sterilizes such machines.

. . . kills bacteria, except the vegetative form.

. . . helps prevent bovine abortion, unless it is explained that this statement is not true under all conditions.

. . . prevents roundworm and disease.

. . . is more than six times as strong as carbolic acid.

. . . "destroys" bad odors, unless it is explained that it must reach the cause of such odors.

. . . "keeps down" flies in outdoor toilets or similar places.

(*Penna. Salt Mfg. Co., "Lewis Lye," Stipulation No.* 02358)

* * * *

Disinfectant and Bactericide

To cease representing that the product

. . . is an effective antiseptic for wounds when used by washing the abrasion with a solution of 1½ tablespoonfuls of the product to each quart of water.

. . . may be used as a substitute for phenol when removing hard corns, or that it has all the advantages of phenol.

. . . constitutes an adequate treatment for ulcers, fistulas and exuberant tissue.

. . . acts as a sterilization agent.

. . . is a disinfectant or germicide in any solutions weaker than competent scientific tests show are necessary to produce the results claimed.

. . . is a germicide capable of killing the pus-forming organism Staphylococcus aureus in concentrations and periods of time less than competent scientific tests show are necessary to produce the results.

. . . is non-toxic.

(*Hexol, Inc., "Hexol," Stipulation No.* 02404)

* * * *

To cease representing that the product

. . . kills the germs that cause diseases "instantly," in hot or cold or water solutions.

. . . sterilizes, purifies, and relieves.

. . . harms nothing but the germs.

. . . is a reliable germicide for all sanitary purposes.

(*General Laboratories, Penna. Salt Mfg. Co., Stipulation No.* 02387)

* * * *

To cease representing that the product

. . . when diluted, one part to 150 parts of water will have the germicidal strength of a 5 per cent solution of carbolic acid.

. . . will keep the home "safely" clean.

. . . will help fight epidemics.

. . . will "guard" children's health or "protect" the family's health.

. . . will repel insects.

(*West Disinfecting Co., "CN Disinfectant," Stipulation No.* 02253)

* * * *

To cease representing that

. . . a 1:25 dilution of the product will kill strains of Staphylococcus Aureus or Streptococcus Haemolyticus after one minute exposure.

. . . the action of the product is stronger than carbolic acid.

. . . a 3 per cent or 6 per cent solution of the product sterilizes or kills anthrax or Subtilis spores in thirty minutes.

. . . a 1:500 dilution of the product will kill Typhoid Bacilli after one minute exposure.

(*Hexol, Inc., "Hexol," Stipulation No.* 02404)

* * * *

Fumigant

To cease representing that the product

. . . is a safer fumigant, unless conspicuous notice is given in direct connection with every claim for safety, that all fumigants are a deadly poison, but by the product's capacity to produce tears warns persons to get away from it.

. . . is the most powerful fumigant yet developed.

. . . penetrates every berry in every bushel of wheat.

To cease representing that

. . . one fumigation a year with the product will provide protection from moths unless it is clearly stated in direct connection that usual general spot treatment is also needed.

. . . the use of the product to fumigate machinery will result in egg-free flour made by such machinery.

(*Innis, Speiden & Co., "Lavacide," Stipulation No.* 02503)

* * * *

Hair Rinse

To cease representing that the product

. . . will make dyed hair natural looking.

(*Drene, Stipulation No.* 02247)

. . . and only this product can enable one to restore and retain the beauty of blond hair.

. . . will keep the hair healthy.

. . . can be used by brunettes without lightening the color of the hair.

. . . "*restores*" any natural characteristic or quality to the hair or will enable every user to be a "*natural*" blonde.

That "60 *per cent of all women were born blonde.*"

(*Marchand's Golden Hair Wash, Stipulation No.* 02334)

* * * *

. . . is not a dye or does not alter the natural appearance or natural color of the hair.

. . . is the only line of hair rinse which is complete or is suitable for all shades of hair.

. . . is the original or the largest selling hair rinse.

. . . is one shade of rinse that adapts itself exactly to all shades of hair.

. . . "*banishes*" dull hair.

. . . assures accuracy in attaining the desired tint.

. . . is a "perfect" rinse.

. . . that all hair requires the application of a tint in addition to a shampoo.

(*Golden Glint Co., Inc., "Golden Glint," Stipulation No.* 02230)

Grown In Fertile Soil

Good soil makes good natural products — and good basic materials make good factory products. The more care taken in the selection and use of materials, the better the appearance and value of the finished handiwork. Niagara Alkali Company is helping many manufacturers improve the appearance and value of their products with high quality Carbonate of Potash, Caustic Potash and Caustic Soda . . . and with efficient cooperation in their use.

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Affiliated with Electro Bleaching Gas Company, Pioneer Manufacturer of Liquid Chlorine

CAUSTIC SODA
CARBONATE OF POTASH
CAUSTIC POTASH

Medicinal Soaps and Ointments

To cease representing that the product

. . . helps promote lustrous hair growth quickly.

. . . aids in normalizing oily skin.

. . . aids in correcting dry skin.

. . . aids in refining skin texture.

. . . removes or aids in clearing blemishes unless limited to blemishes that are externally caused.

. . . aids in imparting new firmness to the skin.

. . . cleanses the pores deeply or thoroughly or eliminates coarse pores.

(*Cuticura Soap & Ointment, Stipulation No.* 0892)

* * * *

. . . is beneficial in the treatment of "the itch" and of itching from all causes; of skin irritations or scalp irritations unless limited to palliative relief; and for sunburn or any other similar condition.

. . . will completely remove or eliminate blackheads.

(*E. T. Browne Drug Co., Inc., "Palmer's Skin" Ointment and Soap, Stipulation No.* 02411)

* * * *

Rat Poisons

To cease representing that the product

. . . is non-poisonous.

. . . is harmless under all circumstances to pets, stock, poultry, other animals and human beings.

. . . is 100 per cent effective in the destruction of rodents.

To cease representing that

. . . the active ingredient thereof, red squill, is a new or original ingredient for rat poison.

. . . all rodents who eat the product will go outside of building to die.

(*The Ohio Prod. Co., "Quick-Death," Stipulation No.* 02412)

Termite Poisons

To cease representing that the product or method

. . . exterminates termites in the ground as well as those in the building.

. . . is "not a temporary control method but complete extermination" or has "lasting results."

To cease representing that

. . . the chemicals used in the product are given the highest rating in the International Termite Exposure Tests of many years duration.

. . . the oils in the product are of great penetrating power which carry the poisonous chemicals deep into the wood or that "deep" penetration is assured.

(*Cre-O-Tox Chem. Prod. Co., Stipulation No.* 2533)

* * * *

. . . all new lumber is infested with termites.

. . . that 98 per cent of buildings have termites in them.

. . . a survey allegedly made by the company, of HOLC properties was in fact a "cross-section" inspection of all such properties.

(*Termiteol Co., Stipulation No.* 2527)

* * * *

Shoe Polishes and Wax

To cease representing that the polish

. . . is waterproof under all conditions of use.

. . . gives brighter and longer lasting shines than any other brand or is in any designated respect superior to all other brands unless such statements are adequately substantiated by competent comparative tests.

(*Griffin Mfg. Co., Inc., Stipulation No.* 02388)

* * * *

. . . or its oils, keep the shoe in its original condition, feed, or nourish the leather.

. . . cause shoes or their leather to retain the appearance they had when new, or take on the appearance of new shoes after being repaired one or more times.

. . . has any control over the number of times a shoe may be repaired or half-soled.

. . . has any effect on the outer sole, insole, box-toe, lining, welting, and other parts of a shoe, excluding the upper shoe leather, by making unqualified statements relative to its effects upon shoes.

(*Barton Mfg. Co., Inc., "Dyanshine," Stipulation No.* 02484)

* * * *

To cease representing that the white shoe dress

. . . removes all spots, grease, and grass stains.

. . . will remove any spots unless, where use of a special cleaning fluid is first necessary, such a fact is directly stated.

. . . is the only white shoe cleaner that is good for all white shoes.

(*Griffin Mfg. Co., Inc., Stipulation No.* 02388)

. . . will not rub off shoes after its application.

(*Barton Mfg. Co., Inc., "Dyanshine," Stipulation No.* 02484).

* * * *

To cease representing that

. . . other shoe dyes, pastes or polishes cause shoes to become marred by unsightly cracks.

(*Barton Mfg. Co., Inc., "Dyanshine," Stipulation No.* 02484)

* * * *

Scouring Powder

To cease representing that the product

. . . will keep an ice-box or refrigerator germ-free.

. . . will absorb all odors or keep a refrigerator odorless.

. . . will not harm the "most delicate" surfaces.

. . . will restore the original brightness and lustre to painted surfaces.

. . . will be effective as a cleansing agent without rubbing or scrubbing.

To cease representing that

. . . fruits and vegetables may stay crisp and fresh much longer when the product is used in the refrigerator.

. . . surfaces cleaned with the products stay clean longer.

(*Fitzpatrick Bros., Inc., "Kitchen Klenzer," Stipulation No.* 02280)

* * * *

Soaps—Cosmetic

To cease representing that

. . . any specified number of disease germs are spread by hands "*alone.*"

. . . the "*special ingredient*" of the soap makes the lather more penetrating.

(*Lever Bros., Lifebuoy and Lux Soap, Stipulation No.* 02114)

* * * *

. . . the use of soap and water is inefficient or is detrimental to the skin, that harmful alkali is present in the

(*Turn to Page* 117)

If It's a QUESTION of PERFUMING...

For LIQUID SOAPS

MM&R L.S. Perfume Oils dissolve clearly without filtration in soap solutions even as dilute as 15%.

BLUEBELL L.S.
AGMERE L.S.
LILAS BLANC L.S.

For TOILET SOAPS

From an extremely wide selection of fine perfume oils, we select these favorites.

COLOGNE DMG
LUXOR BOUQUET
FLORIDA WATER

For SHAMPOOS

Tho three odors listed below have a high rating in our odor appeal performance test.

EAU de COLOGNE S
PALMA BOUQUET
MANHATTA BOUQUET

For HAND PASTE

Economy is the keynote. MM&R substitutes for expensive Oil Citronella and Sassafras do their job well.

FORM-O-SASS } Substitute for
FORM-O-SASS No. 3 } Sassafras Artificial
ANDRO—Substitute for Oil Citronella

For LAUNDRY SOAPS

MM&R specially compounded substitutes cut perfuming costs without sacrificing quality or odor personality.

JERALE—Substitute for Oil Citronella.
SASS-O—Substitute for Sassafras Art.
CITRONELLA SUBSTITUTE No. 21

For SHAVING CREAMS

These are the odors men prefer. All three are popular favorites.

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COLONIAL BOUQUET
PINE BOUQUET SWISS TYPE

For INSECTICIDES

Leaders in their field because they provide tested and assured results at a cost of ½c to 1c per gallon of spray.

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BOUQUET B.L.S.
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Odors that have found special favor with manufacturers of oils and greases.

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It has been found "that in virtually every instance where a producer has told us the limit of his perfuming budget that MM&R has succeeded in meeting the requirements under the allowed production budget." Let us know your requirements and your price limitations. There is reason to believe that we can effect an economy.

For PARA BLOCKS

Very inexpensive, highly concentrated odors with exceptional lasting quality.

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BLUEBELL FX
ROYAL MINT FX

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Outstanding, truly delightful S. T. Aquasol odors ideal for non-alcoholic theatre sprays. Miscible in water.

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Athlete's Foot Control

Report on use of 4:6 Benzyl 2 Chlorphenol

By Dr. H. M. Chiles

TO PREVENT and control the spread of fungus infections, commonly called "Athlete's Foot" is the recognized responsibility of those charged with the maintenance and conduct of premises where there is bare-foot contact with floors. Such responsibility may also extend to certain industrial operations such as the fungicidal treatment of cutting oils. The regular and proper use of materials whose fungicidal values are known is invariably indicated.

Causative fungi are carried by the majority of individuals. Discarded from the body, these lodge in the cracks and crevices of the floor, in the pores of the concrete, on equipment, and also in cutting oils. Vegetable in type, they will grow and multiply under favorable heat and moisture conditions. Many adhere to feet and hands on contact and thus new individual cases of infection have their beginning.

Reliance upon foot-baths is not effective, as experience has shown. The infected areas are not reached. Use of foot-baths is difficult to secure or enforce. Their contents are generally a dirty-looking mess, repulsive to the average prospective user. Their temperature varies from that of the shower water and is usually too low. When used, the time of contact is at best far less than a proper killing time. As an alternative, the regular fungicidal treatment of the entire floor area may present a solution. When combined with scrubbing or mopping, this entails no added labor cost.

The most commonly used Athlete's Foot preventive material has been sodium hypochlorite, which by its nature is not fully suitable for general floor use or for inclusion in cutting oils. Its strong bleaching and oxidizing properties can damage colors, fabrics, clothing, painted surfaces, and the steel in reinforced concrete. It deteriorates rapidly with the introduction of organic matter.

In determining comparative values of fungicides for this purpose, the *Trichophyton interdigitale* was selected as the test organism as it is generally reputed to be both the most common and the most resistant of the causative fungi. A fourteen days' growth on matted and washed raw wool was used. Such wool, in structure and in composition, is similar to both the human hair and the skin scale. It afforded test results under conditions closely approaching those found on floors. So grown, the organism was found to be several times more difficult to kill than the commonly used suspensions.

Observations for presence or absence of growth were made after three weeks incubation at 37° C. It was found that in order to kill the organism with one minute's contact, a 1.67 per cent solution of fresh sodium hypochlorite was necessary. A 0.5 per cent solution was effective with ten minutes contact. Daily preparation of such strength solutions is needed for effective control. This requirement, coupled with the limitations in use as cited, make it an expensive and only partial method of combatting the condition.

A preparation of 4:6 benzyl 2 chlorphenol in coconut oil soap was tested under identical conditions. This was found to be some 60 times as effective as the customary 5 per cent sodium hypochlorite. A dilution of one part in 200 parts of water killed on one minute contact and one part to 400 parts of water proved effective with a contact of ten minutes. This product has been found not to damage anything that soap and water will not damage, is relatively non-volatile and fits into the regular scrubbing and mopping routine without added time or labor cost.

The same material has been used as a fungicide in cutting oils. It has been found that 8 ounces added to 10 gallons of these oils is sufficient to destroy the fungi commonly found in them and that, at the same time, most other bacteria including spore-forming organisms, are likewise destroyed. No objectionable odor or effect on the cutting oil were noted.

Lotion and powder formulations have been tried in which the same phenol derivative is used, and were shown to provide an effective treatment for these fungus infections on the feet, the hands, the scrotal regions or other parts of the body. These formulations used in combination met the three basic needs of such treatment: (a) a powerful fungicide, (b) relative freedom from tissue destruction or skin irritation through use or over-use, (c) protection against recurrence of infection from either internal causes or the wearing apparel. Lotion tested was a 1/1000 solution of 4:6 benzyl 2 chlorphenol in water, alcohol and glycerine.

Fungicidal Tests

The test organism was Trichophyton interdigitale, grown from American Type Culture Collection No. 4808.

Method of Test: A five days' growth of Trichophyton interdigitale on Sabouraud's agar was used. In the

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test, 1 sq. cm. of the agar with adhering mycellium was immersed in various concentrations of the products under test for 5 and 10 minutes respectively. Then removed, rinsed in sterile water and planted on agar slants. These slants were then incubated at 37° C. for three weeks and then observed for presence or absence of growth.

Minimum Concentration Killing In 10 Minutes But Not In 5 Minutes, 20°C.

Product	
Pine Oil Disinfectant....	1 : 50
Lysol, Commercial.....	1 : 150
Creolin, Commercial....	1 : 200
4:6 Benzyl 2 chlorphenol	1 : 1050

Test on Raw Wool

A fourteen days' growth was used. The raw native wool was washed with neutral soap in lukewarm water and thoroughly rinsed, with five changes of distilled water to remove dirt and excess fat. The dried washed wool was matted by hand to form as dense a mat as possible. This was placed in a large flat bottom glass dish, weighted with a flat glass plate and a five pound weight and sterilized at 15 pounds pressure for 30 minutes. The matted wool was then cut into one-half cm. cubes with sharp scissors and again weighted and sterilized. Inoculated media was prepared by melting Sabouraud's agar with 10 per cent excess agar and then adding 10 per cent by volume of a heavy growth of Trichophyton interdigitale in Sabouraud's broth to the melted agar media at 45° C. This inoculated media was then poured over the wool in quantity sufficient to wet all fibres and nearly fill the interstices. The top layer of fibres were uncovered. This mass was then incubated for two weeks and developed a heavy growth of fungi. The individual pieces were used as test units.

These cubes were exposed to the diluted fungicide under test for the time indicated by removing with sterile tweezres made from No. 18 nichrome wire which after flaming were cooled in sterile water. After desired exposure, the wool media was washed five times with approximately five cc. portions of distilled water and then transferred to Sabouraud's broth and incubated at 37° C. for three weeks and then observed for presence or absence of growth. Dilutions of fungicide were used at 10 point intervals up to 1 to 100, at 25 point intervals from there up to 1 to 200 and at 50 point intervals thereafter.

Minimum Concentration (Wool Test) Killing Trichophyton Interdigitale In Time of Exposure Noted. 20°C.

	Time of Exposure		
Product Tested	*One Minute*	*Five Minutes*	*Ten Minutes*
Calcium Hypochlorite, 100%.....	1 in 40	1 in 120	1 in 200
5% Calcium Hypochlorite.....	1 in 2½ (2% sol)	1 in 6¼ (0.8% sol)	1 in 10 (0.5% sol)
Sodium Hypochlorite, 100%.....	1 in 60	1 in 140	1 in 200
5% Sodium Hypochlorite.....	1 in 3 (1.67% sol)	1 in 7½ (0.67% sol)	1 in 10 (0.5% sol)
4:6 Benzyl 2 chlorphenol.....	1 in 200	1 in 300	1 in 400

Other materials have been suggested and used for control of Athlete's Foot. These include (1) Sodium thiosulfate (Hypo) which when used around pools and carried into the water, reduces the chlorine content and might damage plumbing and drainage installations. Adverse reports of effectiveness in use. (2) Copper sulfate, reported ineffective at 1 per cent. (3) Zinc chloride. Fungicidal but requires a very long killing time. Not effective on floors of shower rooms where it is washed away too soon for effectiveness. (4) Formaldehyde products. Not effective in weak dilutions. Generally 10 per cent required. Irritating. Potentially dangerous in use with body contact, especially where opportunity is afforded for combination with various dyes such as found in shoes and hose. Hospital cases reported following body contact.

In schools, the prevalence of scrotal fungus infection, commonly termed "gym itch" presents a common problem, likewise the disinfection, fungicidally, of certain type suits at pools and beaches. Woolens, supporters, sweat shirts and the like cannot be washed with sufficient heat to destroy fungi without damage to the goods. Hence laundering in a common group can spread the infection from one garment to another and then back to an individual. Soaking, before washing or rinsing, in a 1/1000 dilution of 4:6 benzyl 2 chlorphenol is effective control and will not damage goods which soap and water will not damage.

Shellac in Wax Polishes

(*From Page* 97)

them have been thoroughly evaluated, but it is hoped that in the near future commercial supplies of several of these resins will be available for trial by the various industries using shellac.

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ESTABLISHED 1915

Specifications For BEDBUG LIQUID

SPECIFICATIONS covering (1) bedbug liquid and (2) liquid insecticide for use against roaches have been approved for use of the State Purchasing Department of Ohio. These were prepared under the direction of Dr. F. L. Campbell of Ohio State University, and are worthy of careful study by insecticide manufacturers, and of consideration by other purchasing agencies, both public and private. The basis of their compilation is as follows:

Under the present administration of the State of Ohio, the Assistant Director of Public Welfare, H. R. Mooney, and the State Purchasing Agent, C. J. Stark, have made strenuous efforts to provide state institutions with satisfactory supplies at the least cost and with fair competition among suppliers. They have used all technical advice that they could get to improve existing specifications and to provide specifications for materials previously unspecified. Heretofore institutional purchases of insecticides have been made without specifications and often without satisfactory results.

About a year ago, Dr. F. L. Campbell of the Ohio State University was called in as technical consultant on insecticides for state institutions to advise on the formulation of specifications for liquid insecticides to be used primarily for the control of roaches or bedbugs. It was thought reasonable and desirable to write specifications for insecticidal performance around a test on the insects to be controlled, instead of using the Official Peet-Grady test on houseflies. Thanks to the support of the industry through the 1938 National Association of Insecticide & Disinfectant Manufacturers (N.A.I.D.M.) Fellowship at Ohio State University on the development of testing methods against crawling insects, tentative methods using the German roach or bedbugs were already available. However, the specifications were not written hastily. During the past year much additional information was obtained on the operation of the current O.S.U. methods and on the needs and practices of the state institutions. Members of the Insecticide Scientific Committee of the N.A.I.D.M. were consulted from time to time. Finally the following specifications were written and approved.

HOUSEHOLD INSECTICIDE
(Liquid spray type for roach control)
Material

These specifications call for a household insecticide (liquid spray type) having a water-white and odorless oil base. This insecticide shall meet the "general requirements" set forth in Commercial Standard CS 72-38 of the National Bureau of Standards except for paragraph 3 which is altered to read as follows:

> 3. The killing power of the liquid spray type household insecticide shall be determined by the current Ohio State University Method against the German roach until an official method of the National Association of Insecticide and Disinfectant Manufacturers, Inc., shall have been adopted for tests of such insecticides against crawling insects. The Official Test Insecticide of the N.A.I.D.M. shall be used as the standard of comparison in these tests.

The desired liquid shall have an insecticidal value against the German roach equivalent to Grade AA as defined in paragraph 4 of Commercial Standard CS 72-38.

Unless otherwise instructed, the bidder must submit with his bid results of tests against the German roach of the insecticide that he intends to furnish. These tests shall be made by an independent laboratory by the method cited in (3) above.

Test samples will be taken by the State from the contractor's shipment and will be tested for conformity to specifications on insecticidal performance in a laboratory to be chosen by the State. These tests will be made by the method cited in (3) above.

Failure to Meet Specifications

If the material fails to meet the specifications, it shall be rejected and, if the State so elects, the contractor will be required to make satisfactory replacement within 10 days at his expense, including all transportation costs and the cost of testing both original delivery and replacements, or the State may take other appropriate action.

* * *

HOUSEHOLD INSECTICIDE
(Liquid spray type for bedbug control)
Material

These specifications call for a household insecticide (liquid spray type). This insecticide shall meet the "general requirements" set forth in Commercial Standard CS 72-38 of the National Bureau of Standards except for paragraph 3 which is altered to read as follows:

> 3. The killing power of the liquid spray type household insecticide shall be determined by the current Ohio State University Method against the bedbug until an official method of the National Association of Insecticide and Disinfectant Manufacturers, Inc., shall have been adopted for tests of such insecticides against crawling insects. The Official Test Insecticide of the N.A.I.D.M. shall be used as the standard of comparison in these tests.

The desired liquid shall have an insecticidal value against the bedbug equivalent to Grade AA as defined in paragraph 4 of Commercial Standard CS 72-38.

Unless otherwise instructed, the bidder must submit with his bid results of tests against the bedbug of the insecticide that he intends to furnish. These tests shall be made by an independent laboratory by the method cited in (3) above.

Test samples will be taken by the State from the contractor's shipment and will be tested for conformity to specifications on insecticidal performance in a laboratory to be chosen by the State. These tests will be made by the method cited in (3) above.

Failure to Meet Specifications

If the material fails to meet the specifications, it shall be rejected and, if the State so elects, the contractor will be required to make satisfactory replacement within 10 days at his expense, including all transportation costs and the cost of testing both original delivery and replacements, or the State may take other appropriate action.

* * *

Some discussion of the foregoing specifications may be useful. In the first place it was desired to

(*Turn to Page* 129)

. . . good insecticides deserve to be applied properly . . . look into DULA sprayers.

STEAMASTER EXTERMINATOR

With steam serving both as an ingredient and as a force, the insecticide itself is held in moist suspension and the attack is made at full strength . . . thus guaranteeing a 100% thorough job of pest extermination. Completely enclosed heating element. Operates from any electric outlet. No fire hazard. Current shuts off automatically when water level drops below the level of the heating element.

Write Today for Complete Details, Prices and Descriptive Literature.

MOTORMATIC Electric SPRAYER

Designed for thorough pest annihilation . . . and at a saving of time, labor and money. Requires no preliminary preparations. Does not waste a drop of fluid. Gives Insecticide finest possible diffusion and longest possible floating suspension. Automatic shut-off. Operates simply and easily on any current. Heavy duty durable construction.

DULA MFG. CO. INC., 351 Atlantic Ave., Brooklyn, N. Y.

Manufacturers to the Wholesale Trade Only

"The Chemistry and Toxicology of Insecticides"

by

HAROLD H. SHEPARD, Ph.D.
University of Minnesota

Should be included in the Technical library of every insecticide manufacturer

This first complete volume given over solely to the subject of insect toxicology is recommended to all technical men in the insecticide industry. The following subjects are covered in detail: History of insecticides; The principles of insecticide toxicology; The poisonous materials such as arsenicals, fluorides, copper compounds, etc.; Contact insecticides and adjuvants; Plant insecticides such as derris, pyrethrum, nicotine and various synthetic materials; Insect fumigants, attractants, repellants; Testing of insecticides. References are numerous throughout the book. A really fine compilation of both technical and commercial information for insecticide men in agricultural and household divisions. 8 x 11, 383 pp.

Per Copy—$4.00
Send Check With Order

MAC NAIR-DORLAND COMPANY

254 West 31st Street New York City

Label Taboos

(*From Page* 109)

finest soaps, or that soap and water are too drying for use on the skin.

(*Marie Earle, Inc., Stipulation No.* 02340)

* * * *

To cease representing that the product

. . . keeps the complexion "*flawless.*"

. . . is "*made especially*" to guard against cosmetic skin.

. . . can be relied upon to keep the skin "clear" unless limited to such conditions as are due to, or aggravated by, dirt, cosmetic residue, epithelial debris, or foreign materials.

. . . will improve the skin 100 per cent, or any other definite percentage in any substantial number of cases.

(*Lever Bros., Lifebuoy and Lux Soap, Stipulation No.* 02114)

* * * *

. . . "*reaches down to the pores.*"

. . . "*can't irritate the most sensitive skin*" or using any other claim that may imply the soap is non-allergic.

(*Procter & Gamble, Camay Soap, Stipulation No.* 02375)

* * * *

Soap and Flakes Laundering

To cease representing that the product

. . . puts new life into fabrics.

. . . improves the original quality of the fabrics.

(*Lever Bros., Lux Flakes, Stipulation No.* 02114)

* * * *

. . . contains any cleansing agent superior to or different from pure soap.

. . . enables the use of less soap except to the extent that the product itself supplies the required *pure soap* content of a laundry solution.

. . . added to a solution containing an adequate amount of pure soap makes that soap cleanse more efficiently.

. . . eliminates rubbing or scrubbing.

(*General Foods Corp., La France, Stipulation No.* 02376)

* * * *

. . . contains a unique ingredient which makes it the only soap which will remove stubborn "*deep down dirt from clothes.*"

. . . never fades colors, unless directly limited in context to reference to colors which are washable.

. . . cuts washing time, loosens dirt faster, washes clothes whiter, or any other comparison, unless the basis of the comparison is stated in direct connection.

(*Procter & Gamble, White Naphtha Soap, Stipulation No.* 02434)

* * * *

. . . is safer for the hands than all other laundry soaps.

. . . is as safe for the hands as toilet soap.

. . . is the only soap producing "shampoo" action or employing a "suction" principle, or that either of such actions is new.

. . . is made especially for any particular locality.

(*Procter & Gamble, Chipso, Stipulation No.* 02423)

* * * *

Polishing Wax

To cease representing that the product

. . . "stops" spotting.

. . . restores the original finish.

. . . never clouds the lustre of any finish.

To cease representing that

. . . the melting point of the product or of any competing product is any degree of temperature not in accordance with the facts.

(*L. W. Middleton, "Middleton's Weather Wax." Stipulation No.* 02237)

* * * *

Moribund Flies

(*From Page* 103)

racies in determining the numbers of truly moribund flies and take into account any affected flies that later recovered completely. From the standpoint of test operation, a count of dead flies at 48 hours in preference to dead and moribund at 24 hours eliminates much tedious separation or the installation of special recovery equipment. Chief disadvantages of the 48-hour count of dead flies are that additional cages are needed and that the testing capacity of the laboratory is reduced unless operation is carried on over the weekends. Test results would, of course, not be available as quickly as with the present procedure.

It might be advisable at this time to discuss the expediency of changing the present Peet-Grady Test. The Peet-Grady Method employs a flying insect for determining insecticidal performance expressed as a grade designation. Being the only test of this kind officially recognized by the trade, the rating obtained is assumed to apply to the performance of the spray against all household insects that may be controlled by contact insecticides. This assumption we know to be based on generalities only, with numerous cases of non-conformity known. Undoubtedly, an insecticide purchased primarily for use against crawling insects should bear a supplementary rating based on a suitable test procedure.

In controlling crawling insects, where a high ultimate kill within a reasonable period is the important requirement, "moribund kill" is of definite value. However, pyrethrum, thiocyanates, and certain other toxicants, as well as rotenone, give a "moribund kill" against these insect pests; but when the performance rating is based on the Peet-Grady Test, only the additional "moribund kill" of the rotenone-type sprays is in evidence.

For flying insects it is questionable whether additional kill beyond the 24-hour count is of value. In fact, for practical purposes, the speed of paralysis is the important criterion of performance, although a kill test is also advisable to record the permanence of the paralysis.

It has been suggested from time to time that perhaps a knockdown figure at six minutes in connection with the regular kill rating would best evaluate an insecticide for flying insects. Such a test in conjunction with an official method for evaluating a product against crawling insects may provide a more satisfactory means of expressing the true value of an insecticide than modification of the present Peet-Grady Method to specifically include "moribund kill."

"It's a grand and glorious feeling!" to be able to sit back and relax, knowing absolutely that the Penn-Drake Insecti-Sol you use for your insecticide base will always remain 100% volatile and odorless.

The reason for the permanent purity of Penn-Drake Insecti-Sol is quite simple. We don't try to cover up or neutralize the trouble-makers—we *remove* them! The exclusive Penn-Drake Karnsite process, which goes far beyond ordinary refining methods, eliminates every harmful impurity that the most stringent tests can discover.

With over sixty years' refining experience in the richest oil fields in the country, we can serve you efficiently and economically. Our research chemists have perfected an exclusive refining process that gives Penn-Drake Insecti-Sol supreme quality. You can depend on it to retain the distinctive features of your insecticide. Its greater stability and absolute resistance to oxidation guarantee constant uniformity.

Let us send information on how to reduce your manufacturing costs and cut losses from deterioration. Write for full information on Penn-Drake Insecti-Sol.

• • •

PENNSYLVANIA REFINING COMPANY

General Offices, BUTLER, PA.
Refineries at Titusville and Karns City, Pa.
Atlantic Division, No. 1 Gates Ave., Jersey City, N. J.
Warehouse Stocks Maintained in
New York, Chicago, Detroit, Los Angeles, St. Louis, Atlanta, Boston, Scranton, Cleveland, Petersburg, Va.

FEDERAL

The Original Gym Finish

A finish that withstands the varied use and abuse gym, schoolroom and assembly floors are subjected to. This finish resists frequent washing with strong solutions . . . cannot be marred by rubber burns . . . remains beautiful far longer. Use Federal Gym Finish . . . the finish that gives greatest satisfaction and best economy.

G. F. Marking Enamels

These are beautifully clear colors for marking handball courts, basket ball floors, running lanes, etc. The clear, fine pigments are thoroughly incorporated with a clear, wear resistant vehicle which has the same wearing qualities as Gym Finish. These marking enamels possess great covering and hiding power. They are economical to use. Made in white, red and black.

G. F. Floor Cleaner & Polish

This product was specially developed in our laboratories to answer the demand for a cleanser that would thoroughly remove rubber burns, grit, dirt and dust from athletic floors such as gym floors, basket ball floors, handball courts, etc. This cleaner not only cleans perfectly but imparts a beautiful finish. Send for a Trial Sample.

Send for Literature on These Products and Any Others in Which You Are Interested

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FLOOR FINISH DIVISION

331-337 SOUTH PEORIA STREET—DEPT. 44
CHICAGO - - - ILLINOIS

News.....

Put FDA Under Health Service

A plan to transfer jurisdiction of the Food and Drug Administration from the Department of Agriculture to the Public Health Service of the Federal Security Administration has just been announced by President Roosevelt. According to the Reorganization Act, the plan will take effect June 9 if Congress is still in session. The proposal can be killed only by concurrent vote of both houses vetoing the plan in its entirety. If either branch of the legislature approves the plan, it will take effect at once. Paul V. McNutt is the director of the Federal Security Administration. Its activities would be considerably broadened under the new proposal. Inquiries at Washington have revealed that it is proposed to leave the administration of the Insecticide Act of 1910 under the Department of Agriculture. Personnel changes which will be involved are not known as yet.

Continue Insecticide Studies

University of Illinois trustees have renewed for one year an agreement with Standard Agricultural Chemicals, Inc., covering a cooperative investigation of certain cresol compounds for insecticides, with special reference to their use as dormant sprays. Standard Agricultural Chemicals, Inc., is providing the money for the studies which will be conducted jointly at Urbana, Ill., by the Illinois Agricultural Experiment Station and the State Natural History Survey.

Charles W. Gramm Dead

Charles William Gramm, vice-president of Zophar Mills, Brooklyn disinfectant manufacturers, died of a heart attack, on April 14, at his home in Cranford, N. J. He was 62 years old. For many years prior to 1913 he was a member of the Engineering Department of the City of New York; in that year he left to become active in the chemical industry. In 1924, Mr. Gramm became associated with Zophar Mills where he remained as director and vice president until his death. He was well known in philatelic circles and was a charter member of the Brooklyn Historical Society.

New Sanitary Products Firm

Main-Chem Supply Corp., has recently been incorporated in Manhattan. Manufacturers of a line of soaps and disinfectants and suppliers of a complete line of sanitary products, their factory is located on Long Island and the executive offices at 311 W. 23rd St., New York.

Join Sanitary Supply Assn.

National Sanitary Supply Association reports the addition of three sanitary supply houses to membership: Consolidated Supply Co., sanitary supplies distributors, Columbus, Ohio; Detergent Products Corp., manufacturers of detergent compounds and industrial chemicals, Chicago; and Bergonize Co., manufacturers of transparent, protective wall coating, Chicago.

Spirittine Chemical New Plant

Spirittine Chemical Co., Wilmington, N. C., is now operating its new plant two miles south of Wilmington on the Brunswick River. The company manufactures insecticides, disinfectants, soaps, shampoos, termite products, pine oil and wood preservatives, and is one of the oldest firms in this line of business in the South. It distills its own pine oil, operating the oldest pine oil plant in the U. S., the plant having seen continuous service for 63 years.

Louis Hanson is president and owner of the company. He is the son of L. Hanson, Sr., who came from Denmark and founded the original company under the name of the Carolina Oil & Creosote Co. in 1878. Then wood preserving oils were the main products of the company. In 1900, the firm was incorporated under the name of the Spirittine Chemical Co. with L. Hanson, Sr., W. R. Kenan, and Dr. W. A. Hanson as principal owners. The firm then branched out into pine oil products at its original location, foot of Dawson St., Wilmington, N. C. New offices and warehouse have just been established at 117 South Front St. Louis Hanson, the present owner, became a member of the corporation in 1908 after completing his course in chemistry at the University of Pittsburgh. He served during the World War with the 30th Division in France. L. Hanson, Sr. died in 1921 and Louis Hanson became president.

Complain Against Purex

The Federal Trade Commission has issued a complaint against Purex Corp., Los Angeles, claiming misrepresentation in the sale of "Purex," a germicide. Purex Corp., it is claimed, represented that a solution made by adding two tablespoons of "Purex" to a gallon of water will, when applied externally to livestock and other animals, destroy bacteria and disinfect any surface cuts or sores, and that such a solution would prevent the spread of bacteria and destroy bacteria on metal or wood equipment. The complaint states that, while the preparation possesses germicidal properties, the solution in question is too diluted to be effective. For a solution of "Purex" to constitute a competent germicide, says the commission, it would have to contain at least 10 per cent of the preparation in its undiluted form.

Lambert Opens New Lab.

Lambert Pharmacal Co. opened its new manufacturing laboratory in St. Louis on March 28. As part of the celebration connected with the opening, a dinner for employees was given at which special recognition was accorded to three employees who have been with the company for fifty years or more.

Moves Into New Warehouse

Janitorial Supply Co., Passaic, has just moved into a new warehouse located at 60 Jefferson St.

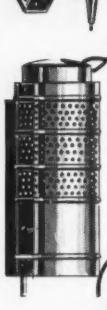
ESTABLISHED 1899 LEADERS EVER SINCE

america's finest SANITARY APPLIANCES

COMPARE!

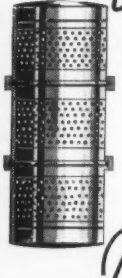
Liquid SOAP-DISPENSERS

Rigid, Stand Bracket or Tilt-Type
Spring or Gravity Valves
Built for steady and hard usage
Heavy *Chrome Finish*



Dependable DRIP-MACHINES

Three styles to choose from
Standard *Universal* *Superior*
Tank or Bottle Types
Neat designs. *Made* of heavy metal.



Universal BLOCK-CABINETS

Round cabinets for four-ounce to two pound blocks

Oblong cabinets for 1½ lb. blocks perfectly perforated to give maximum *deodorizing efficiency*

Universal FLOOR-OILERS

Works by air—Applies floor-oil in thin coats. Forces the oil into the wood. Saves time, labor and oil.

Write for catalogue and Price List.

GARNET CHEMICAL CORP.
ALLENTOWN PA.

Registered Trade Mark

FUMERAL

Pat. Sept. 1934 Pat. Aug. 1938

INSTANT DIFFUSER

Connects with factory steam or air line or operated by Fumeral Portable Air Compressors.

WE SPECIALIZE

● Since 1932 we have specialized in the design and manufacture of various Stationary and Portable liquid diffusers and sprayers for the commercial dispersion of insecticides, disinfectants, deodorants, fumigants, chlorines, caustic soda solutions, perfumes and liquids of all kinds.

STATIONARY

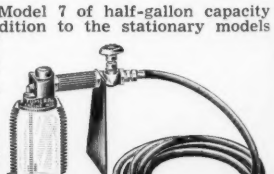
2, 3, 4, or 6 Nozzles.

For dairies, cheese factories, and ice cream plants, we recommend the Model A of one-quart capacity. Install one unit for every 10,000 to 12,000 cubic feet of space, two for 25,000 cubic feet, and so on.

For larger space fumigation such as in flour mills, bottling plants, packing plants, breweries, etc., we recommend the Model B, of half-gallon capacity. Install one unit for every 25,000 cubic feet, two for 50,000 cubic feet, and so on.

PORTABLE FUMERAL DIFFUSER

The Portable Fumeral Model 7 of half-gallon capacity is extensively used in addition to the stationary models for local treatment of machinery, mill leggings, closets, etc.; also for treating grain, carloadings, greenhouses, etc.



For exterminating service in schools, theatres, laundries, barracks, moving vans, railroad freight, passenger and dining cars, airplanes, on merchant and passenger ships.

● Fumeral Stationary and Portable Diffusers are recommended and sold by leading manufacturers and distributors of insecticides and fumigants. See 1939 "Soap Blue Book." Write for illustrated literature, "Modern Warfare On Insects," data, and prices.

FUMERAL COMPANY
RACINE, WISCONSIN

We do not sell insecticides or fumigants.

Public Enemy No. 1

What happened to "Big Butch," Miami Public Enemy No. 1? Ten thousand five hundred dollars reward for the capture of him and his gang! In what probably ranks as the most unusual merchandising stunt pulled this year, Stanco, Inc., on behalf of "Flit," released 2001 flies over Miami and Miami Beach, 2,000 of them marked with a silver spot on their backs, and one with a gold spot. The silver-spotted ones were worth $5 each when brought in dead, together with an open can of "Flit," while the gold-spotted monster, "Big Butch," was worth $500 to his executioner—but it seems he is still at large. At any rate he was not turned in for the bounty.

Tells of New Germicide

Cetylpyridinium chloride, a new product developed by the laboratories of William S. Merrell Co., Cincinnati, and said to combine very high germicidal activity with low toxic effect on body tissues, was described before members of the American Chemical Society at their meeting in Cincinnati, April 11, by Dr. Robert S. Shelton, research director for the Merrell Company. Odorless, nonstaining, stable and comparatively inexpensive, cetylpyridinium chloride, he said, is characterized by great foaming, detergent and soaplike properties. Other features claimed for this new compound are that it seems to be effective when greatly diluted and that it does not interfere with healing or skin granulation. These properties together with the ease of preparation and low toxicity indicate to its discoverers that this new germicide will find wide clinical and surgical application.

Sign Antiseptic Stipulation

Zonite Products Corp., New York, has signed a stipulation with the Federal Trade Commission to discontinue misleading representations in the sale of "Zonite Liquid." Among the claims to which the FTC took exception are that "Zonite Liquid" may always be used without risk; that its use assures freedom from grippe, colds, coughs, etc.; that it will control all dandruff or itchy scalp, kill onion breath permanently, and that the company's products are the only antiseptics which are non-poisonous under similar conditions of use, and that "Zonite Liquid" is 100 per cent effective in preventing athlete's foot.

Ostrom Succeeds Schlotterer

The executive committee of the Drug, Chemical and Allied Trades Section of the New York Board of Trade approved recently the selection of John C. Ostrom as secretary of the section. Mr. Ostrom succeeds Ray C. Schlotterer, secretary for ten years, who resigned April 1 to devote his time more fully to his work as secretary of the Federal Wholesale Druggists Association at 41 Park Row, New York. Mr. Schlotterer retains his position as managing director of the Essential Oil Association of the United States.

Waxaid Personnel Changes

Recent changes in the personnel of Waxaid Co., Baltimore, are as follows: Herbert D. Hamburger, formerly of Budget Loan Co. and Central Insurance Co., was appointed sales manager; J. L. Miller was made assistant manager; and A. Scherr named regional manager.

Chem. Salesmen to Hear Burns

The Salesmen's Association of the American Chemical Industry will meet at a luncheon in the Chemists Club, New York, on May 14. Dr. R. M. Burns, Asst. Chemical Director, Bell Telephone Labs., will speak on the subject: "Chemistry in the Telephone Industry." Golf tournaments scheduled for the Salesmen's Association are as follows: June 18, Green Meadow Club, Harrison, N. Y.; July 16, Canoe Brook Country Club, Summit, N. J.; August 20, Bonnie Briar Country Club, Larchmont, N. Y.; Sept. 17, Pomonok Golf Club, Flushing, L. I.

Cadie in New Quarters

Cadie Chemical Products Inc., have moved into new quarters at 12 W. 21st Street, New York City.

Newark Adopts Insecticide Law

An ordinance controlling the sale and use of insecticides was adopted by the Newark, N. J., city commission, March 20, which went into effect immediately. The new law provides that when any poisonous substance is used as an insecticide, the container must bear a poison label, with the skull and cross bones in red ink. The name of the poison must be given, the antidote and the address of the manufacturer or packer. Another provision prohibits the sale for use by other than pest control operators of any fluoride except fluoride colored Nile blue. Insecticides containing living bacterial organisms are further prohibited. Penalties of $25.00 or ten days in jail are provided for offenses.

Takes Over Ant-B-Gon

California Spray-Chemical Corp., Richmond, Cal. and Elizabeth, N. J., has taken over the manufacture and distribution of "Ant-B-Gon" ant poison, dispensers, trade marks and patents. This product was formerly manufactured by Ant-B-Gon Co. of Los Angeles, owned by Robert B. Loibl, Jr., the inventor.

Nielco Changes Address

Nielco Chemical Corp., formerly Nielco Chemical Co., Detroit, has moved into a new building at 950 E. McNichols Road.

Cite Presto Co.

Maurice A. Goodman, trading as the Presto Co., New York, engaged in the sale of a cleaning fluid designated "Presto," has entered into a stipulation with the Federal Trade Commission to cease implying that he actually owns, operates or controls the plant in which the product is prepared, and to discontinue employing the statement "Removes all stains quickly and permanently," or other similar statements, when, the FTC claims, the use of the product will not return to their original appearance all kinds of fabric materials regardless of the nature of the stain to which the materials have been subjected.

THE MAC-LAC COMPANY

INCORPORATED

127 Maiden Lane **New York, N. Y.**

Manufacturers for More Than 50 Years

SUPERIOR QUALITY

DEWAXED ORANGE SHELLAC

DEVELOPED ESPECIALLY FOR USE IN NO RUBBING WAXES

- *Costs Less*
- *Dissolves Readily*
- *Low in Acid*
- *Gives Beautiful Film*

We Also Offer

EXTRA WHITE REFINED (DEWAXED) SHELLAC

Samples Upon Request

TRY THESE WITHOUT OBLIGATION AND CONVINCE YOURSELF

THE MAC-LAC COMPANY

INCORPORATED

FACTORY: **RAHWAY, N. J.**

SELL MORE INSECTICIDES

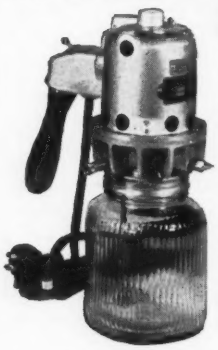
with

BREUER TORNADO ELECTRIC SPRAYER

Easier Sales—More Repeat Orders

New! Model 53G

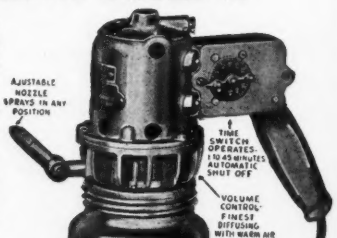
Lowest Priced TORNADO Ever Offered



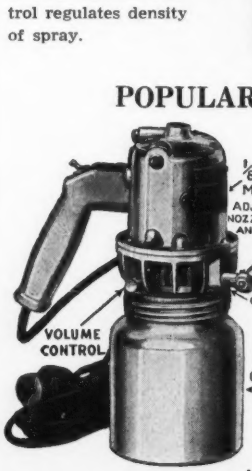
A new high quality compressor-type electric sprayer, selling at a sensationally low price, to help you reach the small users who could never before afford a really good sprayer. Ideal for groceries, restaurants, meat markets, taverns, hotels, rooming houses, etc. G. E. motor, genuine rotary compressor, stationary nozzle, wood pistol grip handle, 25 oz. glass container.

AUTOMATIC MODEL 54

One quart capacity. Set the automatic time switch at any point from 1 to 30 minutes — sprays desired quantity without further attention —automatically shuts off. Can also be used as a hand spray. Adjustable nozzle sprays in any position. Exclusive volume control regulates density of spray.


ADJUSTABLE NOZZLE SPRAYS IN ANY POSITION
TIME SWITCH OPERATES 1 TO 45 MINUTES AUTOMATIC SHUT OFF
VOLUME CONTROL FINEST DIFFUSING WITH WARM AIR
1 QUART CONTAINER

POPULAR MODEL 53



Our finest compressor-type electric hand sprayer. 1/8 H.P. G. E. Motor, genuine rotary compressor, adjustable nozzle for spraying in any position, exclusive volume control. Beautifully finished castings, one quart container. A compressor-type sprayer of the finest quality at moderate price.

ALSO

TORNADO Model 36 with automatic time switch, one gallon capacity
TORNADO Model 6 for mill spraying and moth proofing solutions
TORNADO Models 50 and 51 Fan Type units for crawling insects.

Write Today for Complete Information

Breuer Electric Mfg. Co.

5118 N. RAVENSWOOD AVE. CHICAGO, ILLINOIS

We do not sell insecticides. Our business is manufacturing Sprayers. Patented in U. S. A. and Foreign Countries.

Insecticide-Disinfectant Meeting June 17-19

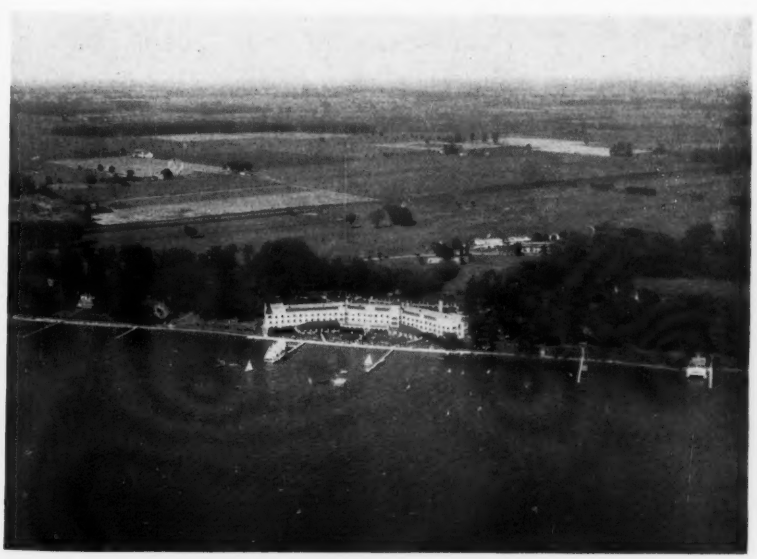
THE 26th annual mid-year meeting of the National Association of Insecticide & Disinfectant Manufacturers will be held on June 17, 18 and 19 at The Spink-Wawasee, Lake Wawasee, Indiana. Business sessions will be held each morning with afternoons given over to conferences and committee meetings, and the annual golf tournament of the Association. The regular meeting will be preceded by a gathering of the Board of Governors on Sunday, June 16. The general convention committee is headed by N. J. Gothard of Sinclair Refining Co.

According to Preston B. Heller of B. Heller & Co., Chicago, chairman of the program committee, the speakers will include W. W. Davis, project engineer of the United Air Lines on "Sanitation in Air transportation"; Harry Garrett, chief, Chicago office of the Food and Drug Administration on "Cooperation between Enforcement Officers and Manufacturers"; George Payne, U. S. Department of Commerce, on "Exporting of Insecticides and Disinfectants"; Dr. Craig Eagleson of the Department of Agriculture on "Recent Research in Livestock Sprays"; Dr. H. Ulvin, chief chemist, Sidney Wanzer & Sons Dairy Co. on "Sanitation Control in Dairy Operation."

A moving picture on "Insect Control" will be shown by Henry Turrie of Wil-Kil, Inc., Milwaukee. A labeling clinic will be held under the leadership of Dr. E. G. Thomssen of the J. R. Watkins Co., Winona, Minn., covering a discussion of recent label problems. A tentative address scheduled is by Dr. E. G. Klarmann, Lehn & Fink, Inc., Bloomfield, N. J. on "The Germicidal Efficiency of Soaps." Other reports and speakers will also be heard.

The mid-year informal dinner will be held on Tuesday evening, June 18, at the hotel, accompanied by a floor show. Entertainment will be in charge of Adam Breuer of the Breuer Electric Manufacturing Co., Chicago.

Aerial view of The Spink-Wawasee on Lake Wawasee, Indiana, where the 26th mid-year meeting of the N.A.I.D.M. will be held.



The annual N.A.I.D.M. golf tournament will be held at the Lake Wawasee course on June 17. Charles Furst of Furst-McNess was the 1939 I. & D. Assn. champion.

The annual golf tournament will be held on Monday afternoon in charge of A. L. van Ameringen of van Ameringen-Haebler, Inc. and Harold Meyer of S. B. Penick & Co. Charles Furst of Furst-McNess Co., Freeport, Ill., is general chairman of the sports committee.

A baseball game between the "Pediculi" and the "Strepticocci," representing the insecticide and the disinfectants groups, will be staged in charge of Harold King of R. J. Prentiss & Co. and Friar Thompson of Hercules Powder Co. A horse-shoe pitching tournament will be held in charge of Wallace Thomas of Gulf Refining Co. and Charles Opitz of John Opitz, Inc.

General hotel arrangements are in charge of J. L. Brenn of the Huntington Laboratories, Inc., Huntington, Ind. Reservations, according to Mr. Brenn, should be made promptly through the office of the Association. Transportation is in charge of J. B. Magnus, of Magnus, Mabee & Reynard, Inc., New York, and bulletins on train arrangements, etc. will be issued by Mr. Magnus in the near future. Registration at the convention will be in charge of D. W. Lynch of the St. Louis office of John Powell & Co. Further details will be issued by the Association office in the near future.

OPEN SEASON

For

MOTHS

This very moment in practically every home, many of these pesky upstarts may be burrowing their way into blankets, furs, clothing, etc., doing untold damage.

Moths run wild these warm Spring days with not one bit of respect for anyone. They would just as soon make their home in a costly oriental as in a house-maid's sweater.

There is a sure way to stop the depredations of these vagrants – and that's with THE CHEMICAL SUPPLY CO's "customer approved" MOTH SPRAYS.

Two grades are available–with Pyrethrum or Synthetic killing agents. Have high killing power, great penetrating properties and are stainless.

Jobbers have learned never to hesitate in recommending the Chemical Supply products –and they are ringing the cash registers of those selling them.

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Does your product require a *certified color* under the new law? Let us advise you, and supply you with exactly the right color for the right purpose!

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Sanitary Suppliers Meet May 20

The Hotel Cleveland, Cleveland, Ohio, will be the scene, May 20 to 22, of the 1940 convention of the National Sanitary Supply Association. Salesmanship will be stressed on the program, new products will be discussed, the business situation reviewed and trade problems debated. Of special interest will be a discussion of "Products Insurance for the Sanitary Supply Distributor," by a speaker from one of the insurance companies specializing in this type of coverage. "Sanitary Supply Salesmen I Have Met," an address by Joseph E. Wurstner of J. E. Wurstner & Co., Cleveland property management concern, will enable the industry to "see itself as others see it." Another talk, based on extensive practical experience, will be by Harold S. Malm, business manager of the Cleveland Arcade, whose topic is "Economics in Building Management." Other speakers booked for the program include Arthur C. Horrocks, of Goodyear Tire & Rubber Co., Akron, Ohio, on "Looking Ahead," and Judge Frederick P. Walter of Cleveland Common Pleas Court, whose banquet address will be on "Salesmanship and Personality."

Criticize Insecticide Bids

Sharp criticism is leveled at a series of bids for 500 gallons of liquid insecticide, recently awarded for use of the C.C.C. at Jefferson Barracks, Missouri. The critic, who prefers to remain anonymous, cites the following case:

"Under date of March 29 of this year, the District Headquarter Master of Missouri C.C.C., Jefferson Barracks, St. Louis, Missouri, issued an invitation for bids on 500 gallons of liquid insecticide to conform with U. S. Army Specification 4-1074 of January 10, 1939. Ten bids were submitted and it is amusing as well as perhaps tragic to the industry to note the prices quoted on what was supposed to be a product coming up to these specifications. Although I have seen the names of the concerns submitting prices, for obvious reasons I do not wish to take any part in passing this information along, and merely as a means of identification will refer to these names alphabetically such as a, b, c, etc. Firm (a) submitted a price of $3.00 per gallon, (b) $1.26, (c) 69 cents, (d) $2.75, (e) $2.78, (f) $1.90, (g) $1.53, (h) $1.14, (i) $1.15, and (j) $2.65.

It certainly appears to me that any intelligent purchasing agent opening bids with a wide range of quotations such as these from 69 cents to $3.00 would certainly see that something was wrong somewhere. Of course prices running from $2.75 to $3.00 or perhaps a little less than $2.75 could be understandable. However, the concern bidding 69 cents per gallon was awarded the contract.

If you are familiar with these Army Specifications, which in themselves are as complicated as a jig-saw puzzle, the general interpretation is that the insecticide required when diluted 3 to 1 should equal the O.T.I. or conversely should be three times stronger than the O.T.I., in other words a semi-concentrate. And at 69 cents per gallon!

Another thing that I have run across is a formula of the Department of the Interior Indian Warehouse in St. Louis which recently requested bids on bed-bug spray, the formula of which is as follows: Flake Naphthalene, 2 lbs.; Kerosene, 5 gals.; **Oil of Mirbane**, 4 ozs.; Carbolic Acid, 1 oz.; Oil of Cedar, 2 ozs.

I am just wondering what would happen to an insecticide manufacturer if he tried to market an insecticide of this sort. And how about the poor Indian?"

FURNITURE POLISH . . . What furniture polishes can and cannot do . . . and the effect of the composition on performance in practical use . . . an article in the next issue of "Soap & Sanitary Chemicals" by Dr. C. A. Tyler.

Gonnett Represents Associated

Associated Chemists, Inc., Chicago insecticide concentrate manufacturers, have recently appointed Cecil H. Gonnett & Co., Montreal, as their representatives for Eastern Canada.

Conn. P. C. Assn. Meets

William O. Buettner, secretary of the National Pest Control Association, was guest speaker at a meeting of the Connecticut Pest Control Association held in the Conn. Experimental Station, New Haven, on April 15. After speaking briefly, Mr. Buettner showed the group a moving picture by Henry Turrie, on insects and rodents.

New Para Manufacturer

Rid-O-Moth Corp., South Kearny, N. J., has recently been organized and the new company is reported completing a plant for the manufacture of paradichlorbenzene. A. Weiner, who is also head of Standard Naphthalene Products Corp., South Kearny, heads the new company. D. W. Blaine is vice-president and W. H. Lerner, secretary.

Form Schwank Corporation

C. W. Schwank Corp., Baltimore, has been formed to manufacture soaps and sanitary supplies by C. W. Schwank who was associated with the R. M. Hollingshead Corp., Camden, N. J. for eight years prior to his resignation last Feb. 1. The new firm, according to an announcement from Mr. Schwank, its president, has located its plant and offices at 423 S. Hanover St., Baltimore, and will produce and sell a full line of cleaning products, waxes, insecticides, disinfectants, and other maintenance chemicals. Mr. Schwank was formerly general sales manager for Hollingshead and for the past six years, director of sales for the maintenance chemical division.

H. B. Charak, formerly New York manager of the industrial division for Hollingshead has joined the Schwank Company as vice-president and manager of the New York office, which is located at 132 West 42d St. Jacob Kaufman, formerly assistant to Mr. Charak in New York, has also joined Schwank as sales manager of the New York office. R. H. Levin, formerly regional manager for Hollingshead in Baltimore and Washington, has joined the Schwank organization to serve in the same capacity, according to the announcement from Mr. Schwank.

Purcell Joins Prentiss

John W. Purcell has recently joined the sales staff of R. J. Prentiss & Co., New York. Mr. Purcell, formerly with McLaughlin Gormley King Co., Minneapolis, will represent the Prentiss company in the East on their entire line of insecticide raw materials.

Reilly

COAL TAR PRODUCTS

For the **SOAP** *and* **DISINFECTANT** *Industry*

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CRESOLS
U.S.P., Meta Para, Ortho, Special Fractions.

CRESYLIC ACIDS
In various distillation ranges—for all uses.

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In all grades, from 10% to 75% tar acid content—carefully blended.

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Low boiling, high boiling, symmetrical.

NAPHTHALENE
Crude (70° to 78.5° C. melting point) and Refined White Naphthalene melting above 79.4° C., in chipped, crystal, ball, flake and powdered form.

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Paradichlor benzene
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We are in a favorable position to work with you on your requirements for these and other chemicals used in the manufacture of soaps, detergents and sanitary products. Why not check with us?

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Debate Insecticide Wage Rates

OPEN hearings on minimum wage rates under the Walsh-Healey Act for the chemical and "related" industries were conducted in Washington before representatives of the Public Contracts Board, April 11, at which criticism was directed against the report of the board's research section on prevailing wage levels in the chemical field. This report, based on a survey of wage levels for 341 plants, showed that the average wage in the lowest-paid one-tenth of the 33,625 workers surveyed was 50.6 cents an hour. The average for the lowest one-fourth was 61.9 cents and the median wage was 72.1 cents per hour.

The validity of this survey was the subject of serious attack in discussion before the board. Warren N. Watson, secretary of the Chemical Alliance, pointed out that of the 341 plants whose wage levels were surveyed, a disproportionate number were of large size. Wage data from small firms had not, he said, been given proper weight in making the survey. Henry C. Fuller, who represented the National Association of Insecticide & Disinfectant Manufacturers, spoke along the same line. He emphasized that wage data has not been collected among manufacturers of household insecticides, disinfectants and sanitary specialties, and insisted that employment conditions in this group are not comparable to those in the basic chemical industry. He suggested that the board's definition of the chemical industry be amended to exclude manufacturers of household insecticides and disinfectants, phrasing a suggested amendment as follows:

"This classification shall not be applicable to firms engaged in processing and/or distributing insect powders and other insecticides including sprays, for household use or for application to animals; or to deodorants, disinfectants or similar products intended for maintenance of cleanliness and sanitation."

In case the board decides negatively on the request to exclude insecticide and disinfectant manufacturers from classification along with the chemical industry, Dr. Fuller requested that a time extension be allowed so that valid wage data from this group can be collected. The board had set May 1 for the filing of briefs, but Dr. Fuller requested an extension beyond this time.

Other witnesses appearing before the board included Weir Mitchell and L. R. Wallack of R. M. Hollingshead Corp., Camden, N. J. They endorsed the suggestion that a separate classification be made for manufacturers of chemical specialties, pointing out that the specialty group employs a high percentage of unskilled and female workers and in other ways has a wage set-up quite dissimilar to the heavy chemical industry.

Subsequent to the hearing in Washington, the following protest against the inclusion of insecticides, disinfectants, and chemical specialties, was filed with L. M. Walling, Administrator of the Public Contracts Board, by the secretary of the National Association of Insecticide & Disinfectant Manufacturers:

(1) Your hearing in Washington was reported to us by our technical consultant, Mr. H. C. Fuller, and it appears that consideration was given almost wholly to the wages paid by manufacturers of basic chemicals. Apparently, little consideration was given to the manufacturers of chemical specialties including household insecticides, disinfectants, etc., who further process and mix basic chemicals and drugs and petroleum products into various finished materials. In this latter group fall most of the manufacturers of insecticides, disinfectants and chemical specialties except where the nature of their main business includes them in some other group, notably petroleum, soap, foods and spices, drugs, etc.

(2) Manufacturers of insecticides, disinfectants, and chemical specialties should, we believe, because of the similarity of their operations, be classified on the same general basis as the drug manufacturers and the wage scale should be approximately the same.

(3) Because the manufacturers of household insecticide, disinfectants, and chemical specialties have little or nothing in common with the large chemical manufacturers in the character of their manufacturing operations, or sale and distribution, we feel that the former should either be classified wholly separately from the chemical group or else as a distinctive subgroup under the chemical industry.

(4) The wage scale paid by the basic chemical industry averages, according to your figures, about 70 cents per hour and is considerably above that paid by the manufacturers of household insecticides, disinfectants, and chemical specialties. The wage scale of the latter group more closely approximates that of the drug trade (37½ cents per hour), or the soap industry (40 cents per hour).

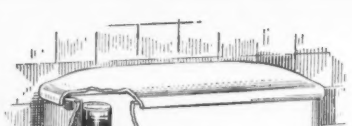
We urge your consideration of the points brought out above, principally for the reason that the inclusion of some 1,500 household insecticide, disinfectant and chemical specialties manufacturers under the wage scale of the chemical industry will be distinctly unjust and far out of line with present minimum wage standards."

Issue Booklet on Dandruff

Lambert Pharmacal Co., St. Louis, is now distributing a new pamphlet entitled "Infectious Dandruff, Its Nature and Treatment," by George F. Reddish. Until recently, the 16-page booklet announces, the specific micro-organism responsible for dandruff had not been identified by dermatologists. Extensive research by Moore and his associates in 1935 and subsequently, says the Lambert booklet, established that this diseased condition is usually caused by a yeast-like, budding, non-filamentous fungus, *Pityrosporum ovale*. In controlled laboratory tests, cultures of this fungus were inoculated into the scarified skin of rabbits and the resulting dandruff scaling was treated experimentally. Results from these tests offered additional information that *Pityrosporum ovale* is a causitive agency of infectious dandruff.

MGK Transfers Torpin

Paul D. Torpin is now representing McLaughlin Gormley King Co., Minneapolis, insecticidal raw materials, in New York and adjacent territory. Mr. Torpin has been with McLaughlin Gormley King Co. for several years, working out of the Minneapolis office. J. W. Purcell was the company's former representative in the East.



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Concealed Guardian of the Modern Bath Room

CREATES NEW MARKET FOR YOUR PINE OIL

STERYL-FLUSH disinfects, deodorizes and keeps the entire toilet system clean. Does not cover up offensive odors, but removes them completely. STERYL-FLUSH fits inside the toilet tank where it operates unseen. It operates only when the toilet is used by flow of water. Non-corrosive and non-injurious to the hands. Pleasantly scented with pure pine oil — just enough to give the bath room a faint, cleanly odor of careful attention to sanitation.

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STERYL PRODUCTS CORP.

112 S. 16th Street **Philadelphia, Pa.**

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FOR MIXERS

Maybe one of your "headaches" is a mixing problem. If so, we'd like to take a crack at it. Our engineering cooperation has changed many a "problem-process" to a smooth-running operation—in practically every industry under the sun.

Model H-1 Heavy-duty portable mixer ¼ HP—1725 RPM.

COMPLETE LINE

Portable — Vertical — Side-Entering High-Speed and Geared Models for Fast Economical Mixing of all Fluids. Models available from ¼ HP to 20 HP.

Write for Eastern's CATALOG-MANUAL containing the following engineering data:

- Engineering Considerations in Mixer Selection
- Power Requirements
- High speed vs. low speed
- Single vs. dual mixers
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Eastern Mixers Cost Less to Own, Operate and Maintain

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DISPENSER for POWDERED SOAPS

Rugged construction . . . especially designed for hard use in shops, factories, garages, etc. . . . simple adjustment regulates flow of soap . . . locks to wall, making dispenser theft-proof . . . Write for further particulars and prices.

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Curfew and Myrtle Streets

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SILVATEEN FOAM AA

● Replaces German Imported Schultz Silica and Neuberger Chalk. Has excellent colloidal suspension and polishing qualities. Ideal for manufacture of government metal polishes.

VOLCANIC ASH

● For scouring powders, cleansers and hand soaps. All required meshes—Finest quality—Send us your specifications—We'll quote prices that are right!

SILICAS and Silica Sand

● Amorphous, crypto crystaline and crystaline. Water ground, water floated, and air floated grades. *Special grinds for metal polish use to replace imported silicas.* SAVE MONEY—Send us your specifications.

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Eastern PCO Conference

The initial Eastern Pest Control Operators' Conference will be held in early part of 1941 at Massachusetts State College, Amherst, Mass. The arrangements with the college authorities have just been made by a committee composed of Walter S. McCloud, president of the National Pest Control Association; William O. Buettner, secretary; Charles W. Houghton, regional vice president; George R. Elliott, treasurer; Bartlett W. Eldredge, past president and Lester M. West and F. H. Bohman, directors. Conferences at Purdue University, University of California and Louisiana State University are to be held as usual in the early part of 1941.

Cite Wood Preservative Co.

Atlas Wood Preservative Co., Memphis, distributor of a preparation intended for protecting wood from termites, decay and fungi, has entered into a stipulation with the Federal Trade Commission to discontinue representing that its preparation, "Xter-Mite," when applied as directed, will protect woods permanently from decay, termites or insects. Other representations which Atlas Co. agrees to discontinue are that "Xter-Mite" has been approved by experts; that termites are in all wood; that there are 44 species of destructive termites in the United States; that one female termite lays 80,000 eggs a day; that the termite "civilizaton" is superior to the human race, or that all states have enacted laws licensing termite eradicators. The company also agrees to cease use of the word "guarantee" unless clear disclosure is made of exactly what is offered by way of security.

New England PCA Meets

A meeting of the New England Pest Control Association was held at the Hotel Lenox in Boston, April 2, which was attended by 33 members and guests. Walter S. McCloud, president of the National Pest Control Association, addressed the group briefly and William O. Beuttner, secretary of the national association, spoke on local problems and the cooperation between the U. S. Government Survey Divisions and the pest control industry.

P.C.O.'s Organize in Indiana

Indiana pest control operators in a meeting at Purdue University, following the recent conference of North Central States Entomologists formed a permanent state organization, to be known as the Indiana Pest Control Operators Association. The 27 pest control operators attending this meeting elected officers and agreed to meet every other month. The officers elected are as follows: J. R. Franklin, Hammond, president; E. E. Edwards, Indianapolis, vice-president; C. O. Partlow, Lafayette, secretary-treasurer; Maurice Bailie, South Bend, Bert Lewis, Muncie, and J. E. Nicholas, Indianapolis, directors. The following members of the Purdue Entomology Dept. were elected as honorary members: J. J. Davis, H. O. Deay, B. E. Montgomery, G. E. Gould, G. E. Lehker and R. L. Morris.

FTC Restricts "Puro" Claims

Puro Co., Inc., St. Louis, has entered into a stipulation with the Federal Trade Commission in which it agrees to cease representing that a moth repellent, "Puro," will protect upholstery from damage by moths, that it is a new discovery and contains a secret chemical, or that it is new or different from all other moth preventives.

NPCA Fills Exec. Vacancies

The National Pest Control Association recently announced the election of A. T. Parsons, San Mateo, Cal., as regional vice-president to fill the vacancy created by the death of Wilbur F. Smith. R. B. Loibl, Sr., Los Angeles was elected at the same time to the board of directors to take Mr. Parsons' place.

Davies Pittsburgh Coal V. P.

Caleb Davies, Jr., of Pittsburgh Coal Carbonization Co., coal tar raw materials house, has just been elected vice president in charge of tar products.

Proposed Fungicide Method

A proposed standard method for testing fungicides differs from the Federal Food and Drug Administration phenol coefficient technique in the preparation of the inoculum. *Tricophyton roseceum* is grown in Petri dishes on Sabouraud A agar, the whole culture transferred to a flask and shaken with glass beads and saline, filtered through cheesecloth, the spores are washed with saline and made up to contain 10,000 spores per cu. mm. R. R. L. Fernbach, N. D. Duffett and C. L. Weirich. *J. Bact.* **39,** 8 (1940).

Bedbug Liquid Specif.

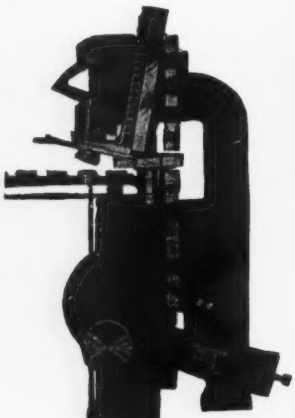
(*From Page* 115)

write specifications that would conform as closely as possible to Commercial Standard CS 72-38, the standard of the Industry and of sensible buyers. It will be noted that except for the insecticidal test to be made, the general requirements of this standard have been used. The Official Test Insecticide of the N.A.I.D.M. and the grading system are the same as in the Peet-Grady method. Thus these specifications should not be confusing to the Industry or to buyers who have used Commercial Standard CS 72-38.

Submission of the results of tests of the product to be furnished is required in order to be sure that the bidder knows what he is doing. Once a manufacturer has submitted such results, he will not be asked to do so for subsequent bids.

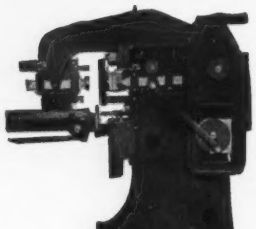
Until an independent commercial laboratory is equipped to use the current O.S.U. method or a method for crawling insects that may be adopted later by the N.A.I.D.M., tests will have to be made at the Ohio State University. Such tests will be made at O.S.U. for bidders on State orders and for the State, and may be made, facilities permitting, for other public agencies that may adopt these specifications. The cost of each test will not exceed $15 per sample. In conversations leading to the adoption of these specifications by the State Department of Public Welfare, the great importance of proper application of liquid insecticides has not been overlooked.

Special Offerings of SOAP MACHINERY *Completely Rebuilt!*

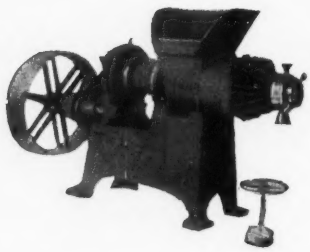


Small size fully automatic Jones toilet soap press. Capacity 150 to 200 small cakes per minute. A real buy at an attractively low price. Has been completely rebuilt in our own shops.

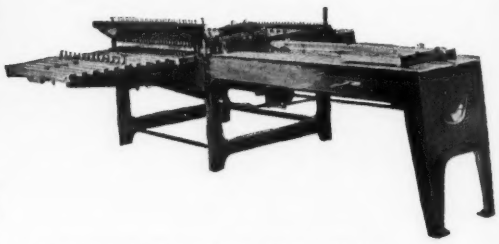
H-A SOAP MILL
This 4-roll granite toilet soap mill is in A-1 shape. Latest and largest size rolls.



4 JONES AUTOMATIC combination laundry and toilet soap presses. All complete and in perfect condition.



Single screw soap plodders with 6, 8, 10 or 12 inch screws. All completely rebuilt and unconditionally guaranteed.



2 Automatic Power Soap Cutting Tables.

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Johnson Automatic Soap Chip Filling, Weighing and Sealing Machines for 2 lb. and 5 lb. Packages guaranteed in perfect condition.

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ADDITIONAL REBUILT SOAP MACHINERY

All used equipment rebuilt in our own shops and guaranteed first class condition.

- H-A, 1500, 3000, 4000, 5000 lbs. capacity. Steam Jacketed Crutchers.
- Dopp Steam Jacketed Crutchers, 1000, 1200, 1500 lbs. and 800 gals. capacity.
- Ralston Automatic Soap Presses.
- Scouring Soap Presses.
- Empire State, Dopp & Crosby Foot Presses.
- 2, 3, 4, 5 and 6 roll Granite Toilet Soap Mills.
- H-A 4 and 5 roll Steel Mills.
- H-A Automatic and Hand-Power slabbers.
- Proctor & Schwartz Bar Soap Dryers.
- Blanchard No. 10-A and No. 14 Soap Powder Mills.
- J. H. Day Jaw Soap Crusher.
- H-A 6, 8 and 10 inch Single Screw Plodders.
- Allbright-Nell 10 inch Plodders.
- Filling and Weighing Machine for Flakes, Powders, etc.
- Steel Soap frames, all sizes.
- Steam Jacketed Soap Remelters.
- Automatic Soap Wrapping Machines.
- Glycerin Evaporators, Pumps.
- Sperry Cast Iron Square Filter Presses, 10, 12, 18, 24, 30 and 36 inch.
- Perrin 18 inch Filter Press with Jacketed Plates.
- Gedge-Gray Mixers, 25 to 6000 lbs. capacity, with and without Sifter Tops.
- Day Grinding and Sifting Machinery.
- Schultz-O'Neill Mills.
- Day Pony Mixers.
- Gardiner Sifter and Mixer.
- Proctor & Schwartz large roll Soap Chip Dryers complete.
- Doll Steam Jacketed Soap Crutchers, 1000, 1200 and 1350 lbs. capacity.
- Day Talcum Powder Mixers.
- All types and sizes—Tanks and Kettles.
- Ralston and H-A Automatic Cutting Tables.
- Soap Dies for Foot and Automatic Presses.
- Broughton Soap Powder Mixers.
- Williams Crutcher and Pulverizer.
- National Filling and Weighing Machines.

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Our Forty Years Soap Experience Can Help Solve Your Problems

Classified Advertising

Classified Advertising—All classified advertisements will be charged for at the rate of ten cents per word, $2.00 minimum, except those of individuals seeking employment where the rate is five cents per word, $1.00 minimum. Address all replies to Classified Advertisements with Box Number, care of *Soap*, 254 West 31st St., New York.

Positions Wanted

Soapmaker-Master and Chemist, 16 years practical experience, 9 years with present firm in middlewest, desires more responsible position. Can analyze, produce and calculate all type soap, detergent, disinfectant and alkaline compounds. Specialist in high grade perfumed potash soaps, shampoos and shaving cream. Results guaranteed. California preferred. Address Box No. 822, care *Soap*.

Salesman, successful specialist selling jobbers of janitor supply and beauty-shop trade. Well versed in demonstration and use of soaps, disinfectants, wax, alkaline compounds and all type cleaners. Desires connection in the far west. Past 8 years employed by large manufacturer in Wis. Address Box No. 823, care *Soap*.

Soapmaker and Chemist, 20 years experience in the manufacture of all types of soaps, mottled soaps, disinfectants and janitor supplies, seeks new connection. Address Box 812, care *Soap*.

Stenographer, Assistant Bookkeeper, correspondent and dictaphone operator with several years experience in the drug and chemical line desires position. Efficient. Highly recommended. Call Dickens 6-4218 or address Box 819, care *Soap*.

Soap Maker and Chemist with long experience in the manufacture of all kinds and grades of soaps and soap products. Address Box No. 816, care *Soap*.

Entomologist, Ph.D.; with twenty years background in all branches of profession and broad research experience in insecticidal field, particularly with household sprays, is desirous of connection with commercial concern, which will offer advancement and other opportunities not afforded by present position. Address Box No. 817, care *Soap*.

Sales Representative: Man with following on Pacific Coast desires to represent manufacturer of fine and medicinal chemicals in that territory. For further details communicate with Box No. 791, care *Soap*.

TAKE A CENSUS OF YOUR EQUIPMENT

Now is the time to check up—get modern equipment . . . get "CONSOLIDATED" . . . Save TIME and money with these GUARANTEED values.

SELECTED SPECIALS

1—Sargent 54" x 72" single Chilling Roll.

2—Proctor & Schwartz Soap Chip Dryers, steel frame; 1 with single cooling roll.

1—Jones Vertical Automatic Soap Press.

1—Jones Horizontal Automatic Soap Press.

3—Houchin Plodders, 10", 8".

2—Pneumatic Scale Carton Packaging Units.

2—Automatic Soap Wrapping Machines.

Crutchers	Foot and Automatic Soap Presses	Filter Presses
Soap Kettles	Cutting Tables	Soap Frames
Powder Mixers	Pulverizers	Powder Fillers
Granite Mills	Soap Pumps	Labellers
Plodders	Soap Chippers	Tanks
Slabbers		Boilers

Send for New Illustrated Circular

CONSOLIDATED PRODUCTS CO., INC.
15-21 PARK ROW NEW YORK, N. Y.
BArclay 7-0600 Cable Address: Equipment
We buy your idle Machinery—Send us a list.

It is buying wisdom to "ASK WECOLINE" before placing your orders for DISTILLED FATTY ACIDS and REFINED VEGETABLE OILS.

Among the Wecoline specialties are LAURIC . . . WHITE OLEIC . . . CAPRIC . . . STEARIC . . . also whole acids of PALM . . . COCONUT . . . CORN . . . TEASEED . . . SOY BEAN . . . LINSEED . . . COTTONSEED.

Learn about Wecoline's high standards of production . . . about the PURITY, WHITENESS OF COLOR, UNIFORMITY, and all around skilled processing of fatty acids and oils.

Inquiries also invited from manufacturers of specialty products which call for individually-processed fatty acids or oils, under rigid specifications.

Write for Booklet "30 Years of Progress"

WECOLINE Products, Inc. BOONTON, N.J.
Sales Offices: NEW YORK . . . . CHICAGO . . . . BOSTON

Rotenone Products

for

Household, Horticultural and Agricultural Insecticides

Derris Inc.

79 Wall Street — New York, N. Y.

CARNAUBA WAX

Choice Selections

The maintenance of our own organization in Brazil places us in a unique position as importers of this product.

ALL GRADES
SPOT OR FUTURES

•

LENAPE TRADING CO., INC.
225 BROADWAY — NEW YORK

Sales Representatives

BOSTON, MASS.
N. S. Wilson & Sons Co.
729 North Station
Industrial Bldg.

ST. LOUIS, MO.
Clifford L. Ions Co.
619 Clark Ave.

CHICAGO
Arthur C. Trask Co.
4103 So. La Salle St.

SYRACUSE, N. Y.
L. R. Cross
418 Solar St.

PHILADELPHIA
R. Peltz Co.
36 Kenilworth St.

FOUGERE SAVON SUPREME

A FINE PERFUME OIL FOR SOAPS AND ALL SOAP PRODUCTS

FOUGERE SAVON SUPREME

We shall be pleased to forward a sample and full information

COMPAGNIE PARENTO, Inc.
Croton-on-Hudson — **New York**

HOCKWALD'S DISPENSERS

No. 1N Wall Type — **No. 2N Basin Type**

All parts replaceable including glass globes. Can be disassembled in two minutes without mechanical skill, yet when in operation it is securely locked together. No cement or plastics used in any part of the machine.

WRITE FOR DESCRIPTIVE LITERATURE AND PRICES

Hockwald Chemical Company
135 Mississippi Street
San Francisco, Cal.

LARGEST PACIFIC COAST MFR. OF POTASH SOAPS AND SANITARY PRODUCTS

Chemist, Ph.D.; many years practical experience in soaps, oils, fats, cosmetics, textile chemicals, etc., desires suitable connection. Address Box No. 796, care *Soap*.

Chemist—with several years experience as chief chemist of large soap and glycerine manufacturers desires superintendency of medium-sized plant. Address Box No. 794, care *Soap*.

Positions Open

Salesmen Wanted: Manufacturer of odorless disinfectant, coefficient 15, non-toxic to skin, is anxious to secure representation thru salesmen or brokers handling cleaning materials to schools, hospitals, etc. Competitively priced. Liberal commission. Advise territory covered and items handled. Address Mer-Kil, 107 N. Wacker, Chicago, Ill.

Wanted for medium size plant, chemist experienced in soap analyses and routine. Prefer chemist now located on Pacific Coast. Give full details as to experience, references and salary. Address Box No. 824, care *Soap*.

Wanted—Production department superintendent. Excellent opportunity for right man in rapidly growing soap manufacturing organization. Technical college graduate with ambition who is progressive and capable of assuming full charge of toilet soap milling and packaging department. Must have had several years experience in this capacity with large soap manufacturer, and have full knowledge of details of operation of this department. No amateurs wanted. Apply giving full details of technical background, industrial experience, present employer and present salary. Answers treated in strict confidence. Box No. 820, care *Soap*.

Wanted: Salesman calling on industrial trade to sell DAN-DEE Waxes; commission basis. Write with full particulars. Address Box No. 783, care *Soap*.

Sales Manager—Manufacturer of detergents, cleaners, dishwashing products, etc., desires to expand. Requires man with experience and proved record in this field. Established firm, ample capital. Box No. 806, care *Soap*.

Manufacturing Chemist—Man experienced in production of liquid soaps, shampoos, and cold-made soaps to take charge of production of these items in organization of rapidly growing soap manufacturer. Excellent opportunity for qualified man who has had required experience who can handle this department progressively and in competent manner. Reply in confidence giving details of experience, employer, and salary. Box No. 821, care *Soap*.

Mr. Jobber:

HERE IS YOUR COMPLETE LINE OF

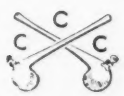
COLE-SPEED

Moth Preventatives

Blockettes

Crystals

Sprays



WRITE FOR COMPLETE CATALOGUE AND PRICES.

For the trade only; in bulk or small packages under private brand.

COLE CHEMICAL CORP.

Long Island City **New York**

State—Sales Manager: Established Southern Manufacturer of high quality Disinfectants, Insecticides, Soaps and Kindred Products selling direct to Institutions, Schools, Industrials, Buildings, etc. has opening for one experienced man for each Mid-Western State and some Southern States. This expansion requires men with successful selling experience in this line only, as well as capable of training Salesmen in their State. Profit-Sharing Basis allowing liberal commissions for your Salesmen. Replies confidential. Address Box No. 814, care of *Soap*.

Wanted: Janitor supply man with good background and sales record who could manage janitor supply department wanted by large soap manufacturer. Give full details and education, experience, etc. Address Box No. 803, care *Soap*.

Manager—General manager required for small soap manufacturing business. Man with executive experience and technical background to take over full management of the business. Please give full details regarding age, experience, education, salary required, etc. Address Box No. 807, care *Soap*.

Salesman wanted to represent manufacturer of soap powder, detergents, and flake soap for metropolitan New York. Must be known to the trade. Salary, bonus. Address Box 811, care *Soap*.

TESTED DISINFECTANTS

Guaranteed phenol coefficients

Coal Tar, Coefs 2 to 20
Pine Oil, Coefs 3 and 4
Cresylic, Coef. 2.5 plus

Every batch is tested bacteriologically by F. & D. A. methods by a well known commercial laboratory (name on request).

"GOOD" PRODUCTS at "GOOD" PRICES

MANUFACTURED BY US UNDER CAREFUL LABORATORY CONTROL

POTASH SOAPS

Guaranteed soap content
Uniform consistency
Controlled alkalinity

Liquid Soaps (up to 40%)
Vegetable Oil Soaps
Pine Scrub Soaps (Liquid and Jelly)
Sassafrassy Scrub Soap
Potash Oil Auto Soap
U. S. P. Green Soap

JAMES GOOD, Inc.

Manufacturing Chemists Since 1868

2112 E. Susquehanna Avenue PHILADELPHIA, PA.

NEW 4 in 1 APPLICATOR

Patent Pending

NEW SAVINGS

THREE TIMES THE WEAR with this new applicator means a big saving for you and a new stimulant for your floor finish sales. Every square inch of the washable wool pad can be used. It has no metal that will mar the most delicate surfaces. Expert construction and best materials assure uniform spreading of all types of finishes on all types of floors. Be the first to show this sensational new development to your customers. Write today.

Send for Samples and Literature

AMERICAN STANDARD MFG. CO.
2509-13 S. Green St. Chicago, Ill.

BUYERS PUT THEIR OK ON

√ WAX SOAP CLEANER
√ RUG and UPHOLSTERY SHAMPOO

the Two New Additions to the BUCKINGHAM QUALITY WAXES and POLISHES

If you haven't yet investigated these two important new additions to the Buckingham line, we hope you will write today for samples.

Buckingham Wax Corp.
Van Dam St. and Borden Ave.
Long Island City N. Y.

SOAP DIES and MOULDS

—for—
TOILET SOAPS
LAUNDRY SOAPS AND
BATH TABLET
STAMPING

For Foot and Power Presses

Established 1894

ANTHONY J. FRIES & SON CO.

717 Sycamore Street Cincinnati, O., U. S. A.

Miscellaneous

Factories Started—remodeled. Instruction in laundry and toilet soap processes and preparations; perfumes; glycerine recovery. Address English or Spanish, Box No. 785, care *Soap.*

For Sale: 1 Garrigue glycerine single effect evaporator, 225 pounds glycerine per hour; 1 Proctor & Schwartz 3 section soap chip dryer with 1 36-inch diameter chilling roll. Priced for quick sale. No Dealers. Address Box 813, care *Soap.*

Rebuilt Soap Machinery: Jones automatic soap press; foot presses; Proctor soap dryer; 4 roll stone mill; Johnson carton sealers; automatic powder fillers; crutchers; plodder; 6 knife chipper; cutting table; frames; filter presses; mixers; boiling kettles; etc. Send for Liquidation Bulletin No. 402. Stein Equipment Corp., 426 Broome Street, New York City.

Wanted for User: Soap chip dryer; filter press; foot and automatic soap press; crutcher; plodder; milling roll; dry powder mixers. What have you? Address Box No. 815, care of *Soap.*

Floor Brushes—We manufacture a very complete line. Catalogue sent upon request. Flour City Brush Company, Minneapolis, Minn., or Pacific Coast Brush Co., Los Angeles, Calif.

We Want to Buy Cans—Discontinued Flit style—pints and quarts—lithographed or plain. Address Box No. 818, care *Soap.*

Cincinnati firm covering part of Ohio would be interested in representing producers of raw materials used by soap manufacturers. Address Box No. 809, care *Soap.*

Maintenance Chemical Manufacturer interested in bringing plant to full capacity, is prepared to produce additional fast selling lines for Janitor Supply houses desiring high quality products made to their own specifications or ours. In excellent position to quote unusually low prices on bulk business. Address Box No. 810, care *Soap.*

For Sale—Cleaner unusual and new with distribution in automotive trade. Manufacturer of product interested chiefly other fields desires to dispose of patent, etc. Suitable for line of soap or detergent manufacturer. For further details, communicate with Box No. 808, care *Soap.*

For Sale: Fifty gallon steel, steam jacketed kettle, built in bronze paddles, driven by a motor and reduction gears, all built up into one unit. Thermometer also. Large draw-off. Also new gas boiler 3 H.P. Zeen Chemical Co., 1311 W. 11th St., Cleveland, Ohio.

Valencia Pumice

Reg. U.S. Pat. Off.

The First and Only Pumice Originating in

AMERICA

Which satisfactorily supplants imported Pumice. Graded to your Specifications.

Write for samples and 12 page booklet of information

BARNSDALL TRIPOLI CORPORATION
PUMICE DIVISION
(Subsidiary Barnsdall Oil Co).
SENECA, MISSOURI, U. S. A.

20 MINUTE DRYING
FLOOR FINISH
is 20th Century Speed

1 Gal. covers approx. 2,500 sq. ft.
Packed in 1 and 5 gal. cans and 10, 15, 30 and 55 gal. drums.

When we put STA-BRITE Self-Polishing Floor Finish on the market, we realized that it would have to be the best that fine material, modern machinery and skilled craftsmen could produce. We knew that, besides manufacturing a floor finish that gave a beautiful lustre, was water-resistant, had heavy-duty durability and non-slip properties, we had to offer more. And we did—namely, 20 minute drying. Today, the great satisfaction of numerous users certainly proves the vast superiority of STA-BRITE.

Send for generous sample of STA-BRITE—and, at the same time, ask for sample of PINE-GLO Neutral Cleanser, our heavy-bodied liquid scrubbing soap that expertly cleans all surfaces safely, speedily and powerfully! Write for new catalog too!

Fill in and Mail Coupon Now!

SUPERIOR SOAP CORPORATION
121 Nostrand Avenue • • Brooklyn, N. Y.

Rush sample(s) of ☐ STA-BRITE ☐ PINE-GLO to me. S-5-40
Send me your new Catalog ☐.
Name .....
Address .....

Something Has Happened

IN THE SOAP DISPENSER INDUSTRY

—and Bobrick did it again! Have you ever seen a liquid soap dispenser WITH NO WASHERS? Which CANNOT LEAK, but has positive action? Made of PLASTIC—as modern as tomorrow? With one SPRING which is UNBREAKABLE? Which has a PUSH-IN VALVE so there is no strain on the bracket? Equipped with beautiful OPAL GLASS JAR which can be removed for cleaning, but LOCKS IN so that it cannot be stolen? Which FILLS FROM THE LOCK-TOP CAP so that jar breakage is minimized? Would you believe that was possible AT ANY PRICE? Would you believe you are going to get all of that in a MEDIUM PRICED DISPENSER, just a few cents more than the least expensive? Watch for formal announcement in next month's SOAP. Or write us now, if you want one of the very first samples.

BOBRICK MANUFACTURING CORPORATION

15 East 26th Street Est. 1906 **New York, N. Y.**

SWEEPING COMPOUND
FOR JOBBING TRADE ONLY

IT'S RED

KLEENSWEEP

THE PATENTED SWEEPING COMPOUND WITH THE SISAL BASE

IT'S GREEN

SANISWEEP

THE SWEEPING COMPOUND WITH THE SAWDUST BASE

IT'S WHITE

NEVASLIP

THE SWEEPING COMPOUND WITH THE MINERAL BASE

OUR PREPARATIONS WILL HELP YOU INCREASE YOUR SALES ON SWEEPING COMPOUND

SWEEPING COMPOUND MNFR'S CO. OF N. Y., INC.
421 BROOME STREET, NEW YORK

We announce development of new type soap colors

PYLAKLORS

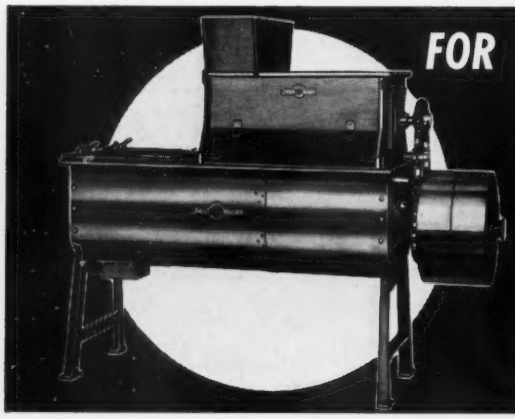
They have good fastness to alkali, light, tin, ageing.

The following shades are already available:

Bright Green	Dark Brown
Olive Green	Palm Green
Yellow	Golden Brown
True Blue	Violet

It will pay you to send for testing samples.

PYLAM PRODUCTS CO., INC.
Manufacturing Chemists, Importers, Exporters
799 Greenwich St. New York City
Cable Address: "Pylamco"



FOR EFFICIENT, ECONOMICAL MIXING

OF SWEEPING COMPOUNDS, DEODORANT CRYSTALS, INSECTICIDES Lower power consumption, rapid, through mixing, and long trouble-free service feature this Sprout-Waldron mixer. Brush sifter, to remove lumps and foreign material, is optional equipment. Capacities 2½ to 15 cu. ft. *Write for catalog.*

SPROUT, WALDRON & CO., INC.
132 SHERMAN ST. MUNCY, PA.
MIXING, CONVEYING, POWER TRANSMISSION MACHINERY

Raw Materials and Equipment

NOTE: This is a classified list of the companies which advertise regularly in SOAP. It will aid you in locating advertisements of raw materials, bulk and private brand products, equipment, packaging materials, etc., in which you are particularly interested. Refer to the Index of Advertisements, page 143, for page numbers. *"Say you saw it in SOAP."*

ALKALIES

American Cyanamid & Chemical Corp.
John A. Chew, Inc.
Columbia Alkali Co.
Diamond Alkali Co.
Dow Chemical Co.
Eastern Industries
Hooker Electrochemical Co.
Innis, Speiden & Co.
Niagara Alkali Co.
Solvay Sales Corp.
Jos. Turner & Co.
Warner Chemical Co.
Welch, Holme & Clark Co.

BULK AND PRIVATE BRAND PRODUCTS

Ampion Corporation (Sanitary Supplies)
Associated Chemists, Inc. (Insecticides)
Baird & McGuire, Inc. (Disinfectants)
Buckingham Wax Corp. (Wax Products)
Candy & Co. (Floor Products)
Chemical Mfg. & Dist. Co. (Soaps and Sanitary Supplies)
Chemical Supply Co. (Disinfectants, etc.)
Chicago Sanitary Prods. Co. (Sanitary Supplies)
Clifton Chemical Co. (Sanitary Supplies)
Cole Chemical Corp. (Sanitary Supplies)
Davies-Young Soap Co. (Potash Soaps)
Federal Varnish Co. (Floor Products)
Fuld Bros. (Sanitary Supplies)
James Good, Inc. (Sanitary Supplies)
Harley Soap Co. (Soap Specialties)
Higley Chemical Co. (Floor Seal)
Hockwald Chemical Co. (Sanitary Supplies)
Hysan Products Co. (Sanitary Supplies)
Koppers Co. (Disinfectants)
Kranich Soap Co. (Potash Soaps)
M. & H. Laboratories (Floor Waxes)
Onalim Co. (Shampoos)
Philadelphia Quartz Co. (Detergents)
Reilly Tar & Chem. Co. (Floor Seals)
Geo. A. Schmidt & Co. (Soaps)
Superior Soap Corp. (Soaps and Waxes)
Sweeping Compound Mfrs. Co. (Sweeping Compound)
Twin City Shellac Co. (Wax Products)
Uncle Sam Chemical Co. (Sanitary Supplies)
T. F. Washburn Co. (Floor Products)
White Tar Co. (Disinfectants, etc.)
Windsor Wax Co. (Wax Products)

CHEMICALS

American-British Chemical Supplies
American Cyanamid & Chemical Corp.
Chemical Mfg. & Dist. Co.
John A. Chew, Inc.
Columbia Alkali Co.
Cowles Detergent Co.
Diamond Alkali Co.
Dow Chemical Co.
E. I. du Pont de Nemours & Co.
Eastern Industries
General Chemical Co.
Hooker Electrochemical Co.
Industrial Chemical Sales Div.
Innis, Speiden & Co.
Monsanto Chemical Co.
Niagara Alkali Co.
Philadelphia Quartz Co.
Rohm & Haas Co.
Reilly Tar & Chemical Corp.
Solvay Sales Corp.
Standard Silicate Co.
Jos. Turner & Co.
Victor Chemical Works
Warner Chemical Co.
Welch, Holme & Clark Co.

COAL TAR RAW MATERIALS

(Cresylic Acid, Tar Acid Oil, etc.)

American-British Chemical Supplies
American Cyanamid & Chemical Corp.
Baird & McGuire, Inc.
Barrett Co.
Innis, Speiden & Co.
Koppers Co.
Mirvale Chem. Co.
Monsanto Chemical Co.
Pittsburgh Coal Carbonization Co.
Reilly Tar & Chemical Co.
White Tar Co.

COLORS

Fezandie & Sperrle
Interstate Color Co.
Pylam Products Co.
Tamms Silica Co.

CONTAINERS AND CLOSURES

American Can Co. (Tin Cans and Steel Pails)
Anchor-Hocking Glass Corp. (Closures and Bottles)
Continental Can Co. (Tin Cans)
Crown Can Co.
National Can Co. (Cans)
Owens-Illinois Glass Co. (Bottles and Closures)
Williams Sealing Corp. (Closures)

DEODORIZING BLOCK HOLDERS

Clifton Chemical Co.
Fuld Bros.
Garnet Chem. Corp.
Hysan Products Co.

INSECTICIDES, SYNTHETIC

American Cyanamid & Chemical Corp.
Associated Chemists, Inc.
Dodge & Olcott Co.
Rohm & Haas Co.
U. S. Industrial Chem. Co.
Whitmire Research Corp.

MACHINERY

Eastern Engineering Co. (Mixers)
Anthony J. Fries (Soap Dies)
Houchin Machinery Co. (Soap Machinery)
Huber Machine Co. (Soap Machinery)
R. A. Jones & Co. (Automatic Soap Presses and Cartoning Machinery)
Karl Kiefer Machine Co. (Filling Machinery)
Koppers Company (Coal Tar Plants, Power Plants, Valves, Castings, Pipe, Tanks)
Mixing Equipment Co. (Tanks, Mixers)
Proctor & Schwartz (Dryers)
C. G. Sargent's Sons Corp. (Dryers)
Sprout, Waldron & Co. (Mixing, Conveying, etc.)
Stokes & Smith Co. (Pkg. Machy.)

CARNAUBA—

Direct Importers
of All Grades

•

ALSO

BEESWAX
HIGH MELTING-POINT
PETROLATUM
JAPAN WAX
And Other Waxes

DISTRIBUTING AND TRADING COMPANY, INC.

21 WEST STREET NEW YORK, N. Y.

Affiliated with LUZZATTO and FIGLIO. Est. 1867

Offices in
Paris, London, Antwerp, Milan, Zurich, Barcelona

HOOKER CAUSTIC SODA

Soap Makers' Grades

To meet the needs of customers in this industry, special grades of Caustic Soda have been developed by Hooker specialists devoted to research in the interests of customers. Manufacturers of soaps are invited to avail themselves of this service in co-operation with their own technical men.

HOOKER ELECTROCHEMICAL CO.
NIAGARA FALLS, NEW YORK
NEW YORK CITY TACOMA, WASHINGTON

474

CRESYLIC ACID

• • •

HIGH BOILING
TAR ACIDS

• • •

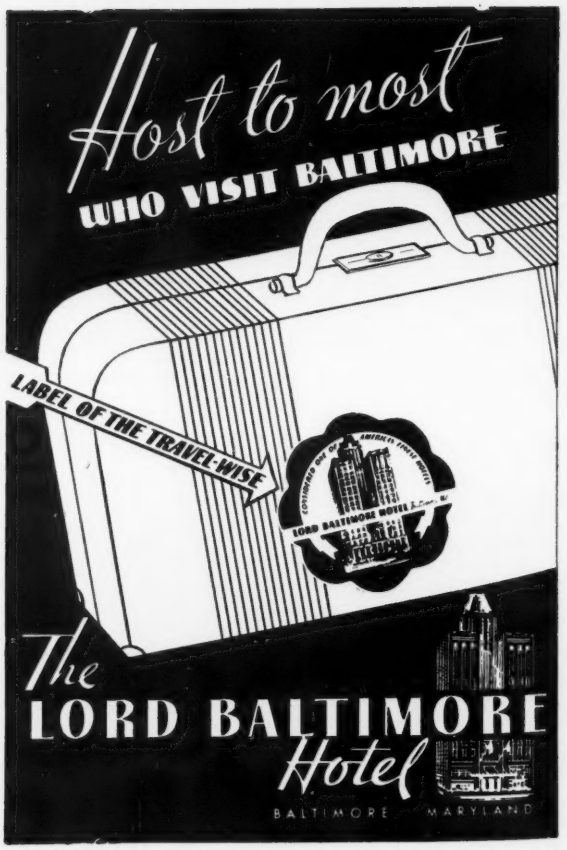
TAR ACID
CREOSOTE OIL

• • •

NAPHTHALENE

• • •

MIRVALE CHEMICAL CO., Ltd.
MIRFIELD YORKS, ENG.



Raw Material and Equipment Guide

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MACHINERY, USED

Consolidated Products Co.
Newman Tallow & Soap Machinery Co.

MISCELLANEOUS

American Standard Mfg. Co. (Wax Applicator)
Anchor-Hocking Glass Corp. (Metal Caps)
Barnsdall Tripoli Co. (Pumice—Tripoli)
Dow Chemical Co. (Germicides, Agricultural Insecticides, Fumigants)
Filtrol Corp. (Purifying and Decolorizing Clay)
Hercules Powder Co. (Pine Oil and Rosin)
Industrial Chemical Sales Div. (Decol. carbon, Chalk)
Innis, Speiden & Co. (Fumigants)
Koppers Company (Coal, Coke, Roofing Materials)
Lenape Trading Co. (Waxes)
Newport Industries, Inc. (Pine Oil and Rosin)
Pennsylvania Refining Co. (White Oils)
Pylam Products Co. (Lathering Agent)
Reilly Tar & Chem. Co. (Preservatives)
Steryl Prods. Corp (Toilet Deodorizer)
Tamms Silica Co. (Silica—Volcanic Ash)
Victoria Paper Mills Co. (Toilet Tissues)

OILS, FATS, AND FATTY ACIDS

T. G. Cooper & Co.
Eastern Industries
Emery Industries, Inc.
Independent Mfg. Co.
Industrial Chemical Sales Div.
Leghorn Trading Co.
Newman Tallow & Soap Machinery Co
Orbis Products Corp. (Stearic Acid)
Wecoline Products Co.
Welch, Holme & Clark Co.

PARADICHLORBENZENE

John A. Chew, Inc.
Dow Chemical Co.
E. I. du Pont de Nemours & Co.
Hooker Electrochemical Co.
Monsanto Chemical Co.
Niagara Alkali Co.
Solvay Sales Corp.
Jos. Turner & Co.

PERFUMING MATERIALS

American-British Chemical Supplies
Aromatic Products, Inc.
Compagnie Parento
Dodge & Olcott Co.
Dow Chemical Co.
P. R. Dreyer Inc.
E. I. Du Pont de Nemours & Co.
Felton Chemical Corp.
Firmenich & Co.
Fritzsche Brothers, Inc.
General Drug Co.
Givaudan-Delawanna, Inc.
L. M. Chemical Co.
Magnus, Mabee & Reynard, Inc.
Monsanto Chemical Co.
Norda Essential Oil & Chemical Co.
Orbis Products Corp.
Rifa—New York, Inc.
Ungerer & Co.
Van Ameringen-Haebler, Inc.
Albert Verley, Inc.

PETROLEUM PRODUCTS

Deodorized Insecticide Base, White Oils, Petroleum, Paraffine Oils, Residues, etc.)
Atlantic Refining Co.
Pennsylvania Refining Co.
L. Sonneborn Sons

PHOSPHATES

Trisodium, Sodium Pyrophosphate, etc.
American Cyanamid & Chemical Corp.
John A. Chew, Inc.
E. I. du Pont de Nemours & Co.
General Chemical Co.
Monsanto Chemical Works
Victor Chemical Works
Warner Chemical Co.

PYRETHRUM AND DERRIS PRODUCTS

Insect Flowers and Powder, Pyrethrum Extract, Derris Products
Associated Chemists, Inc.
Derris, Inc.
Dodge & Olcott Co.
S. B. Penick & Co.
R. J. Prentiss & Co.
McCormick & Co.
McLaughlin, Gormley, King Co.
John Powell & Co.
Whitmire Research Corp.

SILICATES

E. I. du Pont de Nemours & Co.
General Chemical Co.
Philadelphia Quartz Co.
Standard Silicate Co.

SOAP DISPENSERS

Ampion Corp.
Bobrick Mfg. Co.
Clifton Chemical Co.
Fuld Bros.
Garnet Chem. Corp.
Hockwald Chemical Co.
Presto Mfg. Co.

SPRAYERS

Breuer Electric Mfg. Co. (Electric)
Dula Manufacturing Co.
Fumeral Co. (Spraying Systems)

WAXES AND GUMS

Carnauba, Shellac, Candelilla, etc.
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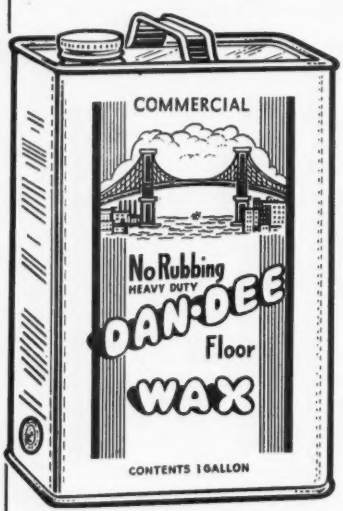

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ELEANOR ROOSEVELT on the air for "Sweetheart Soap" is the news of the month as far as soap selling is concerned. In our humble opinion, she is going to sell a lot of soap, and give greater impetus to the spectacular recent rise of Manhattan Soap. Our guess is that Mrs. Roosevelt could have doubled her present six thousand weekly with one of the larger soapers, but for several reasons, obvious and otherwise, gave "Sweetheart" the nod.

* * *

Entomologists of the U. S. Department of Agriculture tell us that man is not so attractive to mosquitoes after all, horses, cattle, and pigs being preferred as a source of blood. In fact, man rates only slightly ahead of the cat and chicken in mosquito preference. So next time we go fishing, maybe we'll take a horse or cow along, just to see if it's true.

* * *

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* * *

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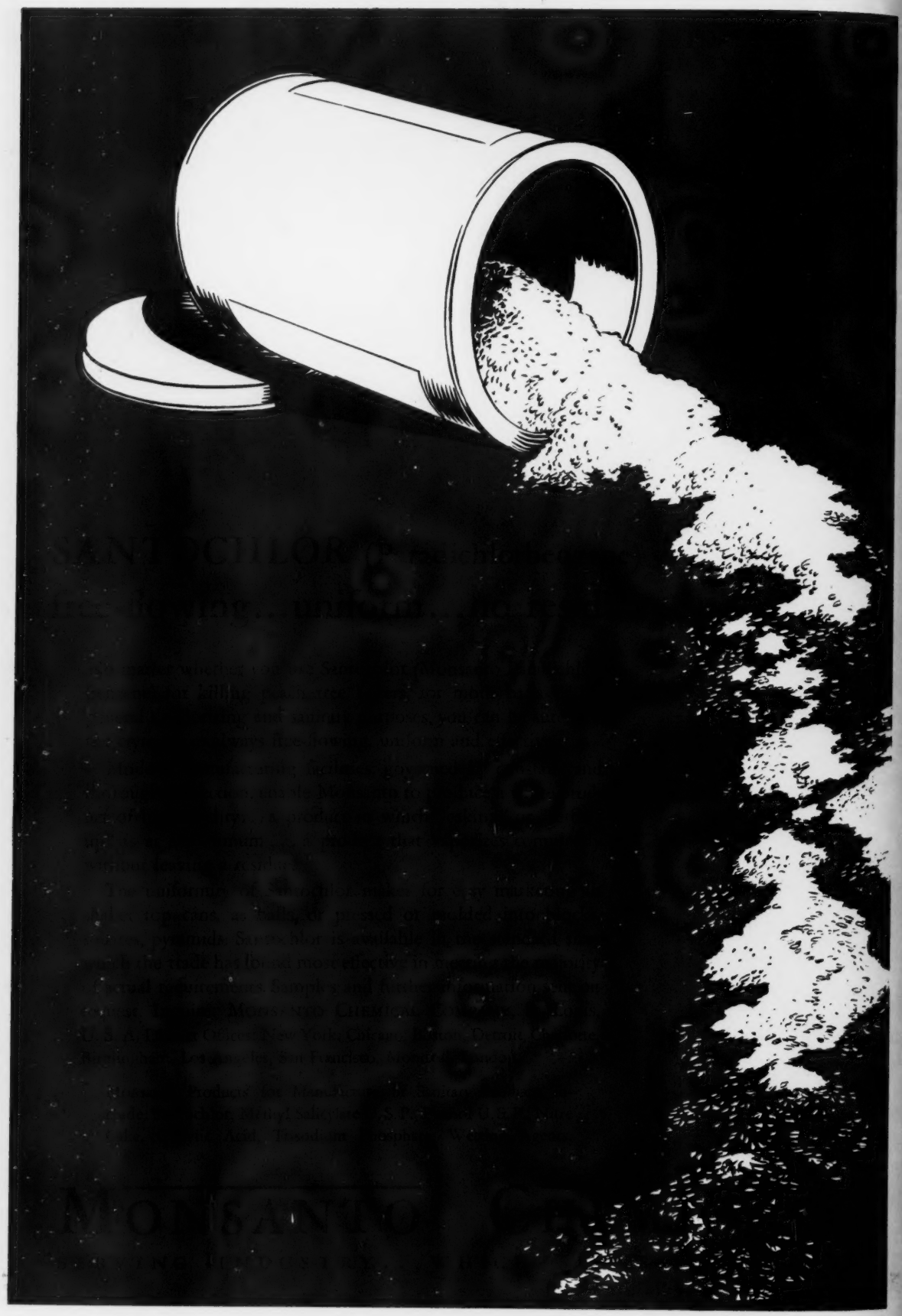
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